

WO 00/50639

Continued

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dehydrogenase DPD	U09178	274270	ASP974VAL
dihydropyrimidine			
dehydrogenase DPD			
dihydropyrimidine	U09178	274270	4-BP DEL 296 to 299 (TCAT)
dehydrogenase DPD			
dihydropyrimidine	U09178	274270	CYS29ARG
dehydrogenase DPD			
dihydropyrimidine	U09178	274270	1-BP DEL, 1897C Frameshift
dehydrogenase DPD			
dihydropyrimidine	U09178	274270	ARG886HIS
dehydrogenase DPD			
dihydropyrimidine	U09178	274270	Arg21Gln
dehydrogenase DPD			
dihydropyrimidine	U09178	274270	Val335Leu
dehydrogenase DPD			
dihydropyrimidine	U09178	274270	Glu386Ter
dehydrogenase DPD			
dihydropyrimidine	U09178	274270	deltaC1897
dehydrogenase DPD			
dihydropyrimidine	U09178	274270	Ser534Asn
dehydrogenase DPD			
dihydropyrimidine	U09178	274270	Ile543Val
dehydrogenase DPD			
dihydropyrimidine	U09178	274270	Val732Ile
dehydrogenase DPD			
deoxycytidine kinase	M60527	125450	115-base pair deletion G to A
deoxycytidine kinase	M60527	125450	glutamic acid for glycine
glucosylceramide synthase	D50840	602874	none found

hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	ILE132MET
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	ASP80VAL
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	ASP201GLY
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	1-BP INS frameshift
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	EX8DEL
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	LEU41PRO
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	24AA+
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	PHE74LEU
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	ASP194ASN
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	ASP193ASN
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	SER110LEU

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phosphoribosyltransferase					
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		VAL179DEL	
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		VAL130ASP	
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		ALA161SER	
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		SER104ARG	
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		PHE199VAL	
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		GLY70GLU	
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		GLY71ARG	
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		GLN108TER	
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		HIS203ASP	
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		ARG44LYS	

ase hypoxanthine-guanine phosphoribosyltransfer	M31642	308000	ASP176TYR
ase hypoxanthine-guanine phosphoribosyltransfer	M31642	308000	2-BP DEL frameshift
ase hypoxanthine-guanine phosphoribosyltransfer	M31642	308000	1-BP DEL, TTA-TA frameshift
ase hypoxanthine-guanine phosphoribosyltransfer	M31642	308000	1-BP DEL, TTG-TG frameshift
ase hypoxanthine-guanine phosphoribosyltransfer	M31642	308000	40-BP DEL frameshift
ase hypoxanthine-guanine phosphoribosyltransfer	M31642	308000	G-to-A +5 intron 8 splice
ase hypoxanthine-guanine phosphoribosyltransfer	M31642	308000	ATAG-TTTG -4 intron 8+I29
ase hypoxanthine-guanine phosphoribosyltransfer	M31642	308000	GTAAGT-to- GTAAAT intron 7
ase hypoxanthine-guanine phosphoribosyltransfer	M31642	308000	AG-to-TG intron 1
ase hypoxanthine-guanine phosphoribosyltransfer	M31642	308000	PRO176LEU

hypoxanthine-guanine phosphoribosyltransfer ase	M31642	308000	ARG51GLY
hypoxanthine-guanine phosphoribosyltransfer ase	M31642	308000	ARG51TER
hypoxanthine-guanine phosphoribosyltransfer ase	M31642	308000	MET56THR
hypoxanthine-guanine phosphoribosyltransfer ase	M31642	308000	MET143LYS
hypoxanthine-guanine phosphoribosyltransfer ase	M31642	308000	ARG170TER
hypoxanthine-guanine phosphoribosyltransfer ase	M31642	308000	13-BP DEL, 5- PRIME UTR
hypoxanthine-guanine phosphoribosyltransfer ase	M31642	308000	EX2DEL
hypoxanthine-guanine phosphoribosyltransfer ase	M31642	308000	EX4-9DEL
hypoxanthine-guanine phosphoribosyltransfer ase	M31642	308000	EX6-9DEL
hypoxanthine-guanine phosphoribosyltransfer ase	M31642	308000	EX9DEL
hypoxanthine-guanine phosphoribosyltransfer ase	M31642	308000	1-BP INS G 207 frameshift

phosphoribosyltransferase					
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	EX2-3DUP		
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		THR168ILE	
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		GLY16SER	
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		GLY58ARG	
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		LEU78VAL	
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	EX6DEL		
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	1-BP INS, T INS 14823		
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		ASP52GLY	
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		GLY140ASP	
hypoxanthine-guanine phosphoribosyltransferase	M31642	308000		ASP194GLU	

ase hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	TYR153TER
ase hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	Mnl I
ase hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	Bam HI
ase hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	54 (from ATG to CTG) resulting in the replacement of methionine with leucine val179gly
ase hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	gly180arg
ase hypoxanthine-guanine phosphoribosyltransferase	M31642	308000	51 del 747 and 797 truncated protein
Bcl-2	M13994	151430	ACC-->GCC Ala43Thr
Bcl-2	M13994	151430	EcoRI polymorphism G to A exon 2
Bcl-2	M13994	151430	ASP294GLY
protein kinase C alpha	X52479	176960	none found
protein kinase C beta 1	X06318	176970	

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protein kinase C delta	L07861	176977	none found	
protein kinase C mu	X75756	*****	none found	
protein kinase C theta	L01087	600448	none found	
protein kinase C zeta	L14283	176982	none found	
ecto-5'-nucleotidase (CD73)	X55740	129190	none found	
alkaline phosphatase	NM_000478	171760		ALA162THR
alkaline phosphatase	NM_000478	171760		ARG54CYS
alkaline phosphatase	NM_000478	171760		ASP277ALA
alkaline phosphatase	NM_000478	171760		ARG54PRO
alkaline phosphatase	NM_000478	171760		GLN190PRO
alkaline phosphatase	NM_000478	171760		ALA16VAL
alkaline phosphatase	NM_000478	171760		TYR419HIS
alkaline phosphatase	NM_000478	171760		GLU174LYS
alkaline phosphatase	NM_000478	171760		ASP361VAL
alkaline phosphatase	NM_000478	171760		GLY317ASP
alkaline phosphatase	NM_000478	171760		PHE310LEU
alkaline phosphatase	NM_000478	171760		GLY439ARG
alkaline phosphatase	NM_000478	171760		1-BP DEL, 1735T frameshift

alkaline phosphatase NM_0004 ⁷⁸	171760	ARG119HIS
alkaline phosphatase NM_0004 ⁷⁸	171760	GLY145VAL
alkaline phosphatase NM_0004 ⁷⁸	171760	ScrFI
alkaline phosphatase NM_0004 ⁷⁸	171760	BclI
ribonucleotide reductase M1 subunit X59543	180410	SacI polymorphism within intron IX
ribonucleotide reductase M1 subunit X59543	180410	TaqI
ribonucleotide reductase M2 subunit X59618	180390	none found
aminopeptidase A L14721	138297	none found
signal transducer and activator of transcription STAT1 M97935	600555	none found
topoisomerase IIa J04088	126430	AGA to AAA ARG486LYS
topoisomerase IIa J04088	126430	deletion of 1320- 1322 Ala429
topoisomerase IIa J04088	126430	Lys-797-->Asn
topoisomerase I J03250	126420	Arg449Gln
topoisomerase I J03250	126420	ASP533GLY
topoisomerase I J03250	126420	ASP583GLY
topoisomerase I J03250	126420	Asn722Ser
topoisomerase I J03250	126420	TaqI
myeloperoxidase X04876	254600	C8089T ARG569TRP
myeloperoxidase X04876	254600	TYR173CYS
myeloperoxidase X04876	254600	MET251THR

myeloperoxidase	X04876	254600	G to A (promoter)
myeloperoxidase	X04876	254600	KpnI
myeloperoxidase	X04876	254600	Dinucleotide Repeat
myeloperoxidase	X04876	254600	EcoRV
myeloperoxidase	X04876	254600	PstI
b3-tubulin	U47634	60266	none found
interleukin 6 (IL6)	M14584	147620	174G-C
interleukin 6 (IL6)	M14584	147620	CA repeat
interleukin 6 (IL6)	M14584	147620	NlaIII promoter
interleukin 6 (IL6)	M14584	147620	AT repeat
interleukin 6 (IL6)	M14584	147620	MspI
interleukin 6 (IL6)	M14584	147620	BglI
interleukin 6 (IL6)	M14584	147620	BglII
interferon alpha1 (IFNa1)	X02956	147660	none found
tyrosine kinase-type cell surface receptor	X03363	164870	VAL655ILE
HER2/ERBB2	X03363	164870	VAL654ILE
tyrosine kinase-type cell surface receptor	X02469	191170	CGC-CCC Arg72 Pro
HER2/ERBB2	X02469	191170	CCG-CTG Pro82Leu
tumor protein p53	X02469	191170	ATG-ACG Met133Thr
tumor protein p53	X02469	191170	cCAA-TAA Gln136Term
tumor protein p53	X02469	191170	cAGA-TGA Arg209Term
tumor protein p53	X02469	191170	aCCC-TCC Pro151Ser
tumor protein p53	X02469	191170	CCG-CTG Pro152Leu
tumor protein p53	X02469	191170	gCCC-TCC Pro219Ser
tumor protein p53	X02469	191170	cAAC-GAC Asn235Asp
tumor protein p53	X02469	191170	GGC-GTC Gly154Val

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tumor protein p53	X02469	191170	ACA-ATA Thr256Ile
tumor protein p53	X02469	191170	CGC-CAC Arg175His
tumor protein p53	X02469	191170	CAT-CGT His193Arg
tumor protein p53	X02469	191170	tCGA-TGA Arg213Term
tumor protein p53	X02469	191170	gCGT-TGT Arg273Cys
tumor protein p53	X02469	191170	TGT-TAT Cys275Tyr
tumor protein p53	X02469	191170	tGAG-AAG Glu180Lys
tumor protein p53	X02469	191170	CGC-CAC Arg181His
tumor protein p53	X02469	191170	gCGC-TGC Arg181Cys
tumor protein p53	X02469	191170	cCGA-TGA Arg196Term
tumor protein p53	X02469	191170	TAT-TGT Tyr220Cys
tumor protein p53	X02469	191170	cTCT-ACT Ser227Thr
tumor protein p53	X02469	191170	AAC-AGC Asn235Ser
tumor protein p53	X02469	191170	CGA-CCA Arg306Pro
tumor protein p53	X02469	191170	cCAC-AAC His233Asn
tumor protein p53	X02469	191170	ATCc-ATG Ile251Met
tumor protein p53	X02469	191170	TCC-TTC Ser241Phe
tumor protein p53	X02469	191170	CGG-CAG Arg248Gln
tumor protein p53	X02469	191170	GGC-GAC Gly245Asp
tumor protein p53	X02469	191170	cGGC-AGC Gly245Ser
tumor protein p53	X02469	191170	cCGG-TGG Arg282Trp
tumor protein p53	X02469	191170	cGGC-TGC Gly245Cys
tumor protein p53	X02469	191170	cCGG-TGG Arg248Trp
tumor protein p53	X02469	191170	CTC-CCC Leu252Pro
tumor protein p53	X02469	191170	gGAA-AAA Glu258Lys
tumor protein p53	X02469	191170	CTG-CAG Leu257Gln
tumor protein p53	X02469	191170	CTG-CCG Leu265Pro
tumor protein p53	X02469	191170	gCGA-TGA Arg306Term
tumor protein p53	X02469	191170	gGTG-TTG Val272Leu
tumor protein p53	X02469	191170	CGT-CAT Arg273His
tumor protein p53	X02469	191170	GGA-GTA Gly325Val

tumor protein p53	X02469	191170	CCT-CTT Pro278Leu
tumor protein p53	X02469	191170	GAA-GCA Glu286Ala
tumor protein p53	X02469	191170	gCGC-TGC Arg337Cys
tumor protein p53	X02469	191170	CTG-CCG Leu344Pro
tumor protein p53	X02469	191170	ARG249SER
tumor protein p53	X02469	191170	VAL157PHE
tumor protein p53	X02469	191170	CYS242TYR
tumor protein p53	X02469	191170	1-BP INS, 151C frameshift
tumor protein p53	X02469	191170	2-BP DEL, frameshift
			CODONS 209-210
tumor protein p53	X02469	191170	1-BP INS, CODONS frameshift
			71-72
tumor protein p53	X02469	191170	LYS120TER
tumor protein p53	X02469	191170	ARG280THR
tumor protein p53	X02469	191170	PRO151THR
tumor protein p53	X02469	191170	LEU35PHE
tumor protein p53	X02469	191170	1-BP DEL, CODON
			257
tumor protein p53	X02469	191170	ALA138PRO
tumor protein p53	X02469	191170	1-BP DEL Codon frameshift
			178
tumor necrosis factor	X01394	191160	LEU29SER
alpha (TNFa)			
tumor necrosis factor	X01394	191160	-1,031 T-->C
alpha (TNFa)			
tumor necrosis factor	X01394	191160	-863 C-->A
alpha (TNFa)			
tumor necrosis factor	X01394	191160	C-850T
alpha (TNFa)			
tumor necrosis factor	X01394	191160	G -238 A
alpha (TNFa)			

tumor necrosis factor alpha (TNFa)	X01394	191160	G-376 A
tumor necrosis factor alpha (TNFa)	X01394	191160	C to T, -857T
tumor necrosis factor alpha (TNFa)	X01394	191160	-308 G/A
tumor necrosis factor alpha (TNFa)	X01394	191160	NcoI
tumor necrosis factor alpha (TNFa)	X01394	191160	C-ins 5'UTR of exon 1
tumor necrosis factor alpha (TNFa)	X01394	191160	ARG32TRP
tumor necrosis factor alpha (TNFa)	X01394	191160	G-376A
2',5'-oligoadenylate synthetase 1 (OAS1)	NM_0061 87	164350	none found
2',5'-oligoadenylate synthetase 2 (OAS2)	M87284	603350	none found
2',5'-oligoadenylate synthetase 3 (OAS3)	*****	603351	none found
excision repair protein ERCC1	M13194	126380	codon 118 C->T silent
xeroderma pigmentosum complementation group A	D14533	278700	ILE132MET
xeroderma pigmentosum complementation group A	D14533	278700	ASP80VAL
xeroderma	D14533	278700	ASP201GLY

pigmentosum complementation group A	D14533	278700	56 CCTTGA to FS20TER CCTTTGA
xeroderma pigmentosum complementation group A	D14533	278700	EX8DEL
xeroderma pigmentosum complementation group A	D14533	278700	LEU41PRO
xeroderma pigmentosum complementation group A	D14533	278700	24AA+
xeroderma pigmentosum complementation group A	D14533	278700	PHE74LEU
xeroderma pigmentosum complementation group A	D14533	278700	ASP194ASN
xeroderma pigmentosum complementation group A	D14533	278700	ASP193ASN

xeroderma pigmentosum complementation group A	D14533	278700	SER110LEU
xeroderma pigmentosum complementation group A	D14533	278700	3-BP DEL VAL179DEL
xeroderma pigmentosum complementation group A	D14533	278700	VAL130ASP
xeroderma pigmentosum complementation group A	D14533	278700	ALA161SER
xeroderma pigmentosum complementation group A	D14533	278700	SER104ARG
xeroderma pigmentosum complementation group A	D14533	278700	PHE199VAL
xeroderma pigmentosum complementation group A	D14533	278700	GLY70GLU
xeroderma pigmentosum complementation group A	D14533	278700	GLY71ARG

group A xeroderma pigmentosum complementation	D14533	278700	GLN108TER
group A xeroderma pigmentosum complementation	D14533	278700	HIS203ASP
group A xeroderma pigmentosum complementation	D14533	278700	ARG44LYS
group A xeroderma pigmentosum complementation	D14533	278700	ASP176TYR
group A xeroderma pigmentosum complementation	D14533	278700	2-BP DEL, GT DEL frameshift
group A xeroderma pigmentosum complementation	D14533	278700	1-BP DEL, TTA- frameshift TA
group A xeroderma pigmentosum complementation	D14533	278700	40-BP DEL, FS frameshift
group A xeroderma pigmentosum	D14533	278700	G+5A intron 8

complementation group A xeroderma pigmentosum complementation	D14533	278700	ATAG-TTTG intron 8	
group A xeroderma pigmentosum complementation	D14533	278700	GTAAGT-to- GTAAAT intron 7	
group A xeroderma pigmentosum complementation	D14533	278700	AG-to-TG last 2 nucleotides of intron 1	PRO176LEU
group A xeroderma pigmentosum complementation	D14533	278700		ARG51GLY
group A xeroderma pigmentosum complementation	D14533	278700		ARG51TER
group A xeroderma pigmentosum complementation	D14533	278700		MET56THR
group A xeroderma pigmentosum complementation	D14533	278700		MET143LYS

pigmentosum complementation group A	D14533	278700	ARG170TER
xeroderma pigmentosum complementation group A	D14533	278700	13-BP DEL, 5- PRIME UTR
xeroderma pigmentosum complementation group A	D14533	278700	EX2DEL
xeroderma pigmentosum complementation group A	D14533	278700	EX4-9DEL
xeroderma pigmentosum complementation group A	D14533	278700	EX6-9DEL
xeroderma pigmentosum complementation group A	D14533	278700	EX9DEL
xeroderma pigmentosum complementation group A	D14533	278700	null allele

xeroderma pigmentosum complementation group A	D14533	278700	G insertion at about nucleotide 207	
xeroderma pigmentosum complementation group A	D14533	278700	INV/DEL, EX6-9	
xeroderma pigmentosum complementation group A	D14533	278700	duplication of exons 2 and 3 and deletion of intron 1	THR168ILE
xeroderma pigmentosum complementation group A	D14533	278700		
xeroderma pigmentosum complementation group A	D14533	278700		GLY16SER
xeroderma pigmentosum complementation group A	D14533	278700		GLY58ARG
xeroderma pigmentosum complementation group A	D14533	278700		LEU78VAL
xeroderma pigmentosum complementation group A	D14533	278700	EX6DEL	

group A xeroderma pigmentosum complementation	D14533	278700	T insertion nucleotide at either nucleotide 14823 or 14824	ASP52GLY
group A xeroderma pigmentosum complementation	D14533	278700		
group A xeroderma pigmentosum complementation	D14533	278700		GLY140ASP
group A xeroderma pigmentosum complementation	D14533	278700		ASP194GLU
group A xeroderma pigmentosum complementation	D14533	278700		TYR153TER
group A metallothionein 1b	AH00151 0	156349	none found	
metallothionein 1e	M10942	156351	none found	
metallothionein 1f	M10943	156352	none found	
metallothionein 1g	J03910	156353	none found	
metallothionein 2a	NM_0059 53	156360	BamHI	
metallothionein 3	NM_0059 54	139255	none found	
asparagine synthetase	M27396	108370	none found	

ornithine decarboxylase 1 (ODC1)	M16650	165640	none found	
O6 alkylguanine-DNA alkyltransferase	M60761	156569	1034A>G	
O6 alkylguanine-DNA alkyltransferase	M60761	156569	1099C>T	
O6 alkylguanine-DNA alkyltransferase	M60761	156569	79G>T	
O6 alkylguanine-DNA alkyltransferase	M60761	156569	GGA to AGA gly160arg	
mismatch repair protein hMSH2	U03911	120435	PRO622LEU	
mismatch repair protein hMSH2	U03911	120435	splice variant DEL 50	
mismatch repair protein hMSH2	U03911	120435	CODONS	
mismatch repair protein hMSH2	U03911	120435	ARG406TER	
mismatch repair protein hMSH2	U03911	120435	HIS639TYR	
mismatch repair protein hMSH2	U03911	120435	3-BP DEL ASN596DEL	
mismatch repair protein hMSH2	U03911	120435	C1801T GLN601TER	
mismatch repair protein hMSH2	U03911	120435	ARG524PRO	
mismatch repair protein hMSH2	U03911	120435	1-BP DEL	
mismatch repair protein hMSH2	U03911	120435	TGT705TT	
mismatch repair protein hMSH2	U03911	120435	22-BP INS 289 codon 97	
mismatch repair protein hMSH2	U03911	120435	GLY322ASP	

mismatch repair protein hMSH2	U03911	120435	A-943+3-T DEL Exon 5
mismatch repair protein hMSH2	U03911	120435	C>T at codon 389
mismatch repair protein hMSH2	U03911	120435	711bp CGA>TGA arg>ter
mismatch repair protein hMSH2	U03911	120435	C/T promoter
mismatch repair protein hMSH2	U03911	120435	CTT to TTT at phe>leu codon 390
mismatch repair protein hMSH2	U03911	120435	1-bp insertion in exon 12
mismatch repair protein hMSH2	U03911	120435	codon 888 del C
mismatch repair protein hMSH2	U03911	120435	T-to-C exon 13
cytochrome P450 aromatase (CYP19)	X13589	107910	ARG435CYS
cytochrome P450 aromatase (CYP19)	X13589	107910	CYS437TYR
cytochrome P450 aromatase (CYP19)	X13589	107910	splice donor 29 extra amino (GT>GC) of intron 6 acids
cytochrome P450 aromatase (CYP19)	X13589	107910	ARG375CYS
cytochrome P450 aromatase (CYP19)	X13589	107910	1-BP DEL, 408C frameshift
cytochrome P450 aromatase (CYP19)	X13589	107910	GT to AT exon and intron 3
cytochrome P450 aromatase (CYP19)	X13589	107910	G-1094 -A ARG365GLN
cytochrome P450 aromatase (CYP19)	X13589	107910	G-->A at Val80 silent

aromatase (CYP19)	X13589	107910	G-to-A Val370-to-Met
cytochrome P450			
aromatase (CYP19)	X13589	107910	(TTTA) _n in intron 5
cytochrome P450			
aromatase (CYP19)	X13589	107910	Arg264cys
cytochrome P450			
aromatase (CYP19)	M11050	138040	ASP641VAL
glucocorticoid receptor	M11050	138040	4-BP DEL 2 bases of the
glucocorticoid receptor			exon and the
			first 2
			nucleotides of
			intron 6
glucocorticoid receptor	M11050	138040	LEU753PHE
glucocorticoid receptor	M11050	138040	ILE747THR
glucocorticoid receptor	M11050	138040	CYS736SER
glucocorticoid receptor	M11050	138040	CYS736THR
glucocorticoid receptor	M11050	138040	ASN363SER
glucocorticoid receptor	M11050	138040	Base-pair deletion in 32 amino acid
			exon 9 deletion
glucocorticoid receptor	M11050	138040	Q710X
glucocorticoid receptor	M11050	138040	L753F
glucocorticoid receptor	M11050	138040	trinucleotide Arg453
			insertion
glucocorticoid receptor	M11050	138040	T insertion 1188 and frameshift
			1189
glucocorticoid receptor	M11050	138040	A to G 3'-splice frameshift
			junction of intron G
glucocorticoid receptor	M11050	138040	BclI
glucocorticoid receptor	M11050	138040	TthIII
glucocorticoid receptor	U25029	138040	none found

alpha glucocorticoid receptor	X03348	138040	none found	
beta multidrug resistance protein MDR1	X96395	171050		GLY185VAL
multidrug resistance protein MDR1	X96395	171050		Ser893Ala
multidrug resistance protein MDR1	X96395	171050	HindIII	
progesterone receptor	M15716	264080		
insulin-like growth factor binding protein 2	X16302	146731	EcoRI	
insulin-like growth factor binding protein 4	M62403	146733	none found	
multidrug resistance protein MDR2	NM_0003 92	601107	none found	
lipocortin 1/annexin 1	V00546	151690	none found	
androgen receptor	M20132	313700	PARTIAL DEL	ARG773CYS
androgen receptor	M20132	313700		TRP717TER
androgen receptor	M20132	313700		VAL866MET
androgen receptor	M20132	313700		TRP794TER
androgen receptor	M20132	313700		LYS588TER
androgen receptor	M20132	313700		TYR761CYS
androgen receptor	M20132	313700		LYS882TER
androgen receptor	M20132	313700		ARG772CYS
androgen receptor	M20132	313700		ALA771THR
androgen receptor	M20132	313700		MET786VAL
androgen receptor	M20132	313700		VAL730MET
androgen receptor	M20132	313700	(CAG) ⁿ	
androgen receptor	M20132	313700	ARG773HIS	

androgen receptor	M20132	313700	ARG607GLN
androgen receptor	M20132	313700	VAL865MET
androgen receptor	M20132	313700	VAL865LEU
androgen receptor	M20132	313700	ARG855HIS
androgen receptor	M20132	313700	ILE869MET
androgen receptor	M20132	313700	GLN60TER
androgen receptor	M20132	313700	5-KB DEL, EX E
androgen receptor	M20132	313700	5-KB DEL, EX F,G
androgen receptor	M20132	313700	ARG608LYS
androgen receptor	M20132	313700	ARG839HIS
androgen receptor	M20132	313700	ARG839CYS
androgen receptor	M20132	313700	THR877ALA
androgen receptor	M20132	313700	LEU676PRO
androgen receptor	M20132	313700	THR877SER
androgen receptor	M20132	313700	HIS874TYR
androgen receptor	M20132	313700	GLN902ARG
androgen receptor	M20132	313700	ALA721THR
androgen receptor	M20132	313700	SER647ASN
androgen receptor	M20132	313700	LEU707ARG
androgen receptor	M20132	313700	CYS579PHE
androgen receptor	M20132	313700	PHE582TYR
androgen receptor	M20132	313700	PRO546SER
androgen receptor	M20132	313700	GLU2LYS
androgen receptor	M20132	313700	MET780ILE
androgen receptor	M20132	313700	ARG846HIS
androgen receptor	M20132	313700	Insert of 69 nucleotides
androgen receptor	M20132	313700	LEU172TER
androgen receptor	M20132	313700	(CAA) _n
androgen receptor	M20132	313700	(GGN) _n
androgen receptor	M20132	313700	pro892ser

androgen receptor	M20132	313700	598 or 599 ter
androgen receptor	M20132	313700	Del T at 3286 frameshift
androgen receptor	M20132	313700	Gln798Glu
androgen receptor	M20132	313700	G214R
androgen receptor	M20132	313700	G Codon 210 A
androgen receptor	M20132	313700	G Codon 211 A
androgen receptor	M20132	313700	Arg615His
androgen receptor	M20132	313700	Arg752Gln
androgen receptor	M20132	313700	C>T within exon B. silent
androgen receptor	M20132	313700	G2677A glu629arg
androgen receptor	M20132	313700	Stu I
androgen receptor	M20132	313700	arg726leu
androgen receptor	M20132	313700	del1893 frameshift
androgen receptor	M20132	313700	arg840his
androgen receptor	M20132	313700	Hind III
androgen receptor	M20132	313700	val 581 phe
androgen receptor	M20132	313700	MaeIII
androgen receptor	M20132	313700	CAG340TAG Gln>Ter
androgen receptor	M20132	313700	gly743val
androgen receptor	M20132	313700	HpaII
androgen receptor	M20132	313700	HhaI
androgen receptor	M20132	313700	G2314A ala>thr
clustrin/TRPM-2	M64722	185430	asp317 his
clustrin/TRPM-2	M64722	185430	codon 328 (G-->A) asp328asp
fos proto-oncogene	K00650	164810	T-->C transition in intron 2
myc proto-oncogene	V00568	190080	PRO59ALA
myc proto-oncogene	V00568	190080	PRO57SER
myc proto-oncogene	V00568	190080	ASN86THR
myc proto-oncogene	V00568	190080	GLU39ASP
bleomycin hydrolase	X92106	602403	1450A-G ILE443VAL

estrogen receptor 1 (ESR1)	M12674	133430	done	
estrogen receptor 2 (ESR2)	X99101	601663	done	
trefoil factor 1/sP2	X00474	113710		1-BP INS Codons 38 to 41
Bcl-2 associated protein/bax	L22473	600040		
Bcl-2 associated protein/bax	L22473	600040		1-BP DEL Codons 38 to 41
Bcl-2 associated protein/bax	L22473	600040		GLY67ARG
Bcl-2 associated protein/bax	L22473	600040		7-BP DEL codons 38 to 41
protein kinase C alpha	X52479	176960		ASP294GLY
protein kinase C beta 1	X06318	176970	none found	
protein kinase C delta	L07861	176977	none found	
protein kinase C mu	X75756	*****	none found	
protein kinase C theta	L01087	600448	none found	
protein kinase C zeta	L14283	176982	none found	
insulin-like growth factor binding protein 1	NM_000596	146730	none found	
insulin-like growth factor binding protein 10	U62015	602369	none found	
insulin-like growth factor binding protein 3	NM_000598	146732	none found	
insulin-like growth factor binding protein 5	L27560	146734	none found	
insulin-like growth factor binding protein 6	M69054	146735	none found	
insulin-like growth factor binding protein 10	L19182	602867	none found	

factor binding protein 7				
interferon gamma	NM_0008	602376	none found	
receptor 2 (IFNGR2)	74			
interferon alpha	X77722	107450	none found	
receptor 1 (IFNAR1)				
interferon alpha	U68755	147569	Gln64Arg	
receptor 2 (IFNAR2)				
interferon beta1	V00546	147640	none found	
(IFNb1)				
interferon gamma	L07633	147570	CA repeat itron 1	
(IFNg)				
interferon gamma	L07633	147570	CGA to CAA Arg140Gln	
(IFNg)				
interferon gamma	L07633	147570	G5644A	
(IFNg)				
interferon gamma	J03143	107470	395C-A SER-TER	
receptor 1 (IFNGR1)				
interferon gamma	J03143	107470	1-BP DEL frameshift	
receptor 1 (IFNGR1)				
interferon gamma	J03143	107470	ILE87THR	
receptor 1 (IFNGR1)				
interferon gamma	J03143	107470	4-BP INS 104 to 107 frameshift	
receptor 1 (IFNGR1)				
interferon gamma	J03143	107470	IVS3	
receptor 1 (IFNGR1)				
interferon gamma	J03143	107470	4-BP DEL truncated protein	
receptor 1 (IFNGR1)			Val14Met	
interferon gamma	J03143	107470		
receptor 1 (IFNGR1)				
interferon gamma	J03143	107470	TaqI	
receptor 1 (IFNGR1)				

interferon omegal (IFNw1)	X02669	147553	none found
interleukin 1 alpha (IL1a)	M15329	147760	C to T -889
interleukin 1 alpha (IL1a)	M15329	147760	Dinucleotide repeat
interleukin 1 alpha (IL1a)	M15329	147760	46 bp tandem repeat
interleukin 1 beta (IL1b)	K02770	147720	intron 6 TaqI
interleukin 1 beta (IL1b)	K02770	147720	+5887 C --> T
interleukin 1 beta (IL1b)	K02770	147720	position -511
interleukin 1 beta (IL1b)	K02770	147720	exon 5 (position +3953)
interleukin 1 beta (IL1b)	K02770	147720	Asp106Asn
interleukin 1 receptor (IL-1R)	M27492	147810	PstI
interleukin 10 (IL10)	M57627	124092	G -1082 A
interleukin 10 (IL10)	M57627	124092	C-to-A 571
interleukin 10 (IL10)	M57627	124092	A-597 C
interleukin 10 (IL10)	M57627	124092	T -824 C
interleukin 10 (IL10)	M57627	124092	second dinucleotide repeat
interleukin 10 (IL10)	M57627	124092	A -592 C
interleukin 10 (IL10)	M57627	124092	2 CA repeat
interleukin 10 receptor alpha (IL-10Ra)	U00672	146933	none found
interleukin 11 (IL11)	X58377	147681	5' dinucleotide

interleukin 12a (IL12a)	M65271	161560	repeat none found
interleukin 12b (IL12b)	M65272	161561	4.4-KB DEL
interleukin 13 (IL13)	X69079	147683	none found
interleukin 15 (IL15)	U14407	600554	none found
interleukin 15 receptor alpha (IL-15Ra)	U31628	601070	none found
interleukin 16 (IL16)	NM_0045 13	603035	none found
interleukin 18 (IL18)	*****	600953	none found
interleukin 2 (IL2)	X01586	147680	-330
interleukin 2 (IL2)	X01586	147680	166
interleukin 2 (IL2)	X01586	147680	Dinucleotide Repeat
interleukin 2 (IL2)	X01586	147680	AUUA motif deleted
interleukin 2 receptor alpha (IL-2Ra)	X01057	147730	4-BP DEL 60 to 64 frameshift
interleukin 2 receptor alpha (IL-2Ra)	X01057	147730	TaqI
interleukin 2 receptor beta (IL-2Rb)	M26062	146710	CA repeat
interleukin 2 receptor gamma (IL-2Rg)	D11086	308380	LYS97TER
interleukin 2 receptor gamma (IL-2Rg)	D11086	308380	ARG267TER
interleukin 2 receptor gamma (IL-2Rg)	D11086	308380	SER286TER
interleukin 2 receptor gamma (IL-2Rg)	D11086	308380	CYS62TER
interleukin 2 receptor gamma (IL-2Rg)	D11086	308380	GLY114ASP

interleukin 2 receptor gamma (IL-2Rg)	D11086	308380	G-to-A first position of intron 3	ILE153ASN
interleukin 2 receptor gamma (IL-2Rg)	D11086	308380		
interleukin 2 receptor gamma (IL-2Rg)	D11086	308380		LEU271GLN
interleukin 2 receptor gamma (IL-2Rg)	D11086	308380	9-BP DUP	GLN-HIS-TRP
interleukin 2 receptor gamma (IL-2Rg)	D11086	308380	INS	CYS115ARG
interleukin 2 receptor gamma (IL-2Rg)	D11086	308380		ARG285GLN
interleukin 2 receptor gamma (IL-2Rg)	D11086	308380		ARG222CYS
interleukin 2 receptor gamma (IL-2Rg)	D11086	308380	690-691 hotspot	
interleukin 3 (IL3)	M20137	147740	none found	
interleukin 3 alpha receptor (IL-3aR)	M74782	308385	none found	
interleukin 4 (IL4)	M13982	147780	C-589T	
interleukin 4 (IL4)	M13982	147780	Dinucleotide Repeat	
interleukin 4 (IL4)	M13982	147780	intron 2	
interleukin 4 (IL4)	M13982	147780	-285 C-T	
interleukin 4 receptor (IL-4R)	X52425	147781	-81 A-G	GLN576ARG
interleukin 4 receptor (IL-4R)	X52425	147781		ILE50VAL
interleukin 4 receptor (IL-4R)	X52425	147781		S503P
interleukin 5 (IL5)	X04688	147850	none found	

interleukin 5 receptor alpha (IL-5Ra)	M96652	147851	Dinucleotide repeat	
interleukin 6 receptor (IL-6R) (20)	M20566	147880	dinucleotide (CA)	
interleukin 7 (IL7)	J04156	146660	none found	
interleukin 7 receptor (IL-7R)	M29696	146661		THR66ILE
interleukin 7 receptor (IL-7R)	M29696	146661		ILE138VAL
interleukin 7 receptor (IL-7R)	M29696	146661	AG-to-AA splice junction intron 4	
interleukin 7 receptor (IL-7R)	M29696	146661		trp217 to ter
interleukin 8 (IL8)	M26383	146930	HindIII	
interleukin 8 receptor alpha (IL-8Ra)	M68932	146929	none found	
interleukin 8 receptor beta (IL-8Rb)	M94582	146928	none found	
interleukin 9 (IL9)	X17543	146931	Dinucleotide repeat	
interleukin 9 receptor (IL-9R)	M84747	300007	none found	
interleukin receptor 11 alpha (IL-11a)	U32324	600939	none found	
interleukin receptor 12 beta (IL-12b)	U03187	601604		GLN32TER
interleukin receptor 12 beta (IL-12b)	U03187	601604		GLN376TER
interleukin receptor 12 beta (IL-12b)	U03187	601604	409-549DEL frameshift	
interleukin receptor 12 beta2 (IL-12b2)	U03187	601642	none found	

interleukin receptor 13 alpha (IL-13a)	S80963	300119	none found
interleukin receptor 13 alpha2 (IL-13a2)	X95302	300130	none found
lipocortin 2/annexin 2	D00017	151740	none found
lipocortin 3/annexin 3	M20560	106490	tandem repeat TAAA
lipocortin 3/annexin 3	M20560	106490	SalI
lipocortin 3/annexin 3	M20560	106490	BglII
lipocortin 5/annexin 5	NM_0011 54	131230	EcoRI
lipocortin 5/annexin 5	NM_0011 54	131230	PvuII
lipocortin 7/annexin 7 (splice variant 1)	NM_0040 34	186360	none found
lipocortin 7/annexin 7 (splice variant 2)	NM_0011 56	186360	none found
trefoil factor 2/TFF2	X51698	182590	25 bp tandem repeat
trefoil factor 3/sP2	L08044	600633	none found

Table 19. Identified
Variances in Genes or
Related Pathways
involved in
Neurological or
Psychiatric Disease

Nicotinic, Cholinergic receptor beta 1	X14830	100710	LEU263MET
Nicotinic, Cholinergic receptor beta 1	X14830	100710	VAL266MET

Nicotinic, Cholinergic receptor, muscle d	X55019	100720	none found	
Nicotinic, Cholinergic receptor epsilon polypeptide	X66403	100725		ARG147LEU
Nicotinic, Cholinergic receptor epsilon polypeptide	X66403	100725		ARG64TER
Nicotinic, Cholinergic receptor epsilon polypeptide	X66403	100725		LEU269PHE
Nicotinic, Cholinergic receptor epsilon polypeptide	X66403	100725		PRO121LEU
Nicotinic, Cholinergic receptor epsilon polypeptide	X66403	100725		THR264PRO
Nicotinic, Cholinergic receptor, muscle g	NM_0051 99	100730	none found	
Acetylcholinesterase/A CHE	M55040	100740	1431 C/T 446 silent	
Acetylcholinesterase/A CHE	M55040	100740	408 G/C arg561pro	
Acetylcholinesterase/A CHE	M55040	100740		HIS322ASN
adenosine deaminase 22	NM_0000 22	102700		LYS80ARG
adenosine deaminase 22	NM_0000 22	102700		ARG101TRP
adenosine deaminase 22	NM_0000 22	102700		ARG101GLN

adenosine deaminase NM_000022	102700	ARG211HIS
adenosine deaminase NM_000022	102700	LEU304ARG
adenosine deaminase NM_000022	102700	ALA329VAL
adenosine deaminase NM_000022	102700	ALA39VAL
adenosine deaminase NM_000022	102700	3.25-KB DEL
adenosine deaminase NM_000022	102700	PRO297GLN
adenosine deaminase NM_000022	102700	ARG76TRP
adenosine deaminase NM_000022	102700	ARG149GLN
adenosine deaminase NM_000022	102700	PRO274LEU
adenosine deaminase NM_000022	102700	LEU107PRO
adenosine deaminase NM_000022	102700	ARG211CYS
adenosine deaminase NM_000022	102700	ALA215THR
adenosine deaminase NM_000022	102700	GLY216ARG
adenosine deaminase NM_000022	102700	IVS3AS, A-G, -2 EX4DEL
adenosine deaminase NM_000022	102700	ARG156CYS
adenosine deaminase NM_000022	102700	SER291LEU

adenosine deaminase NM_000022	102700	IVS10AS, G-A, -34	
adenosine deaminase NM_000022	102700		ASP8ASN
adenosine deaminase NM_000022	102700	IVS2DS, G-A, +1	
adenosine deaminase NM_000022	102700	7-BP INS, IVS8AS	
adenosine deaminase NM_000022	102700	IVS1DS, G-C, +1	
adenosine deaminase NM_000022	102700		GLY74VAL
adenosine deaminase NM_000022	102700	IVS5DS, G-A, +1, EX5 DEL 116-BP DEL	
adenosine deaminase NM_000022	102700		LEU152MET
adenosine deaminase NM_000022	102700		THR233ILE
adenosine deaminase NM_000022	102700		TYR97CYS
adenosine deaminase NM_000022	102700		LEU106VAL
adenosine deaminase NM_000022	102700		G74C
adenosine deaminase NM_000022	102700		V129M
adenosine deaminase NM_000022	102700		G140E
adenosine deaminase NM_000022	102700		R149W

adenosine deaminase NM_000022	102700	Q199P
adenosine deaminase NM_000022	102700	462delG
adenosine deaminase NM_000022	102700	E337del
adenosine deaminase NM_000022	102700	tetranucleotide repeat
adenosine deaminase NM_000022	102700	Q3X
adenosine deaminase NM_000022	102700	R142Q
adenosine deaminase NM_000022	102700	R142X
adenosine deaminase NM_000022	102700	PstI
adenosine deaminase NM_000022	102700	G to A at the invariant 5' GT of intron 7
adenosine deaminase NM_000022	102700	Glu 217 Lys
adenosine deaminase NM_000022	102700	del exon 7
adenosine deaminase NM_000022	102700	Apa I
Adenosine A1 Receptor; Adoral/G protein-coupled	102775	1777C/A
Adenosine A1 Receptor; Adoral/G protein-coupled	102775	1827C/T

Adenosine A1 Receptor; Adoral/G protein-coupled	L22214	102775	1904C/T
Adenosine A1 Receptor; Adoral/G protein-coupled	L22214	102775	2126G/T
Adenosine A1 Receptor; Adoral/G protein-coupled	L22214	102775	2294insT
Adenosine A1 Receptor; Adoral/G protein-coupled	L22214	102775	267 + 275C/T
Adenosine A1 Receptor; Adoral/G protein-coupled	L22214	102775	2776C/T
Adenosine A1 Receptor; Adoral/G protein-coupled	L22214	102775	2777del36
Adenosine A1 Receptor; Adoral/G protein-coupled	L22214	102775	2819T/G
Adenosine A1 Receptor; Adoral/G protein-coupled	L22214	102775	805T/G
Adenosine A1 Receptor; Adoral/G protein-coupled	L22214	102775	48T/A
Adenosine A1 Receptor; Adoral/G protein-coupled	L22214	102775	716T/G
Adenosine A2	X68486	102776	1083C/T

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Receptor; Adora2a/G protein-coupled Adenosine A2	X68486	102776	405C/T	
Receptor; Adora2a/G protein-coupled Adenosine A2	X68486	102776	432C/T	
Receptor; Adora2a/G protein-coupled Adenosine A2	X68486	102776		Gly-340-Ser
Receptor- like/ADORA2L1 adenylate-cyclase activating polypeptide 1	*****	102777	none found	
receptor/ADCYAP1R1 alpha-2a-adrenergic receptor; ADRA2A alpha-2a-adrenergic receptor; ADRA2A alpha-2a-adrenergic receptor; ADRA2A alpha-2a-adrenergic receptor; ADRA2A alpha-1a-adrenergic receptor; ADRA1A alpha-1b-adrenergic receptor; ADRA1B alpha-1c-adrenergic	D17516	102981	none found	
	M18415	104210	-1291	
	M18415	104210	DraI	
	M18415	104210	HhaI	
	M18415	104210	MspI promoter	
	M76446	104219	none found	
	L31773	104220	none found	
	D25235	104221	PstI	

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receptor; ADRA1C alpha-1d-adrenergic receptor; ADRA1D	M76446	104222	none found	
alpha-2c-adrenergic receptor; ADRA2C	J03853	104250	(CA)n	
alpha-2b-adrenergic receptor; ADRA2B	AF005900	104260	none found	
presenilin 1	NM_0000 21	104311	IVS8AS, G-T, -1, EX9DEL	
presenilin 1	NM_0000 21	104311	1-BP DEL, G	
presenilin 1	NM_0000 21	104311	intron 3' to exon 8	
presenilin 1	NM_0000 21	104311	T/G intron 9	
presenilin 1	NM_0000 21	104311	HIS163ARG	
presenilin 1	NM_0000 21	104311	ALA246GLU	
presenilin 1	NM_0000 21	104311	ALA426PRO	
presenilin 1	NM_0000 21	104311	ARG278THR	
presenilin 1	NM_0000 21	104311	CYS410TYR	
presenilin 1	NM_0000 21	104311	GLU120ASP	
presenilin 1	NM_0000 21	104311	GLU280ALA	
presenilin 1	NM_0000 21	104311	GLU280GLY	

presenilin 1	NM_000021	104311	Glu318Gly
presenilin 1	NM_000021	104311	gly378glu
presenilin 1	NM_000021	104311	HIS163TYR
presenilin 1	NM_000021	104311	LEU250SER
presenilin 1	NM_000021	104311	Leu262Phe
presenilin 1	NM_000021	104311	Leu282Arg
presenilin 1	NM_000021	104311	LEU286VAL
presenilin 1	NM_000021	104311	lys123glu
presenilin 1	NM_000021	104311	MET139VAL
presenilin 1	NM_000021	104311	MET146ILE
presenilin 1	NM_000021	104311	MET146LEU
presenilin 1	NM_000021	104311	MET146VAL
presenilin 1	NM_000021	104311	PRO267SER
presenilin 1	NM_000021	104311	Pro436Gln
presenilin 1	NM_000021	104311	Ser169Leu
Human cerebrovascular	M16765	104760	

and neuritic plaque amyloid beta-protein mRNA, 3' end	M87290	106165	1166A-C
angiotensin receptor 1/AGTR1A			
angiotensin converting enzyme/dipeptidyl carboxypeptidase	NM_000789	106180	250-bp in/del
angiotensin converting enzyme/dipeptidyl carboxypeptidase	NM_000789	106180	3 in the 3' UTR
angiotensin converting enzyme/dipeptidyl carboxypeptidase	NM_000789	106180	5 in the 5' region
angiotensin converting enzyme/dipeptidyl carboxypeptidase	NM_000789	106180	Pst I RFLP
Interferon (alpha,beta, .omega) receptor 1	J03171	107450	none found
apolipoprotein E/APOE	NM_000041	107741	7 AA insertion; tandem repeat of residues 121-127
apolipoprotein E/APOE	NM_000041	107741	A178G Threonine42Alanine
apolipoprotein E/APOE	NM_000041	107741	A490C Lysine146Glutamine
apolipoprotein E/APOE	NM_000041	107741	A490G Lysine146Glutamic Acid
apolipoprotein E/APOE	NM_000041	107741	A940C Serine296Arginine
apolipoprotein E/APOE	NM_000041	107741	Aintron3G substitution

E/APOE	41		creates 2 abnormally spliced mRNA forms
apolipoprotein E/APOE	NM_0000 41	107741	C305G Proline84Arginine
apolipoprotein E/APOE	NM_0000 41	107741	C460A Arginine136Serine
apolipoprotein E/APOE	NM_0000 41	107741	C478T Arg142142Cys142
apolipoprotein E/APOE	NM_0000 41	107741	C487T Arginine145Cysteine
apolipoprotein E/APOE	NM_0000 41	107741	C526T Arginine158Cysteine
apolipoprotein E/APOE	NM_0000 41	107741	C736T Arginine228Cysteine
apolipoprotein E/APOE	NM_0000 41	107741	C805G Arg251251Gly251
apolipoprotein E/APOE	NM_0000 41	107741	G144deletion Leucine60Termination Codon (frameshift)
apolipoprotein E/APOE	NM_0000 41	107741	G349A Ala9999Thr99
apolipoprotein E/APOE	NM_0000 41	107741	G434A Gly127127Asp127
apolipoprotein E/APOE	NM_0000 41	107741	G455A Arginine134Glutamine
apolipoprotein E/APOE	NM_0000 41	107741	G488A Arginine145Histidine
apolipoprotein E/APOE	NM_0000 41	107741	G568C Ala152Proline

apolipoprotein E/APOE	NM_0000 41	107741	G61A Glutamic Acid3Lysine
apolipoprotein E/APOE	NM_0000 41	107741	G683A Tryptophan210 Termination Codon
apolipoprotein E/APOE	NM_0000 41	107741	G725A Arg224224Gln2 24
apolipoprotein E/APOE	NM_0000 41	107741	G875A Arginine274His tidine
apolipoprotein E/APOE	NM_0000 41	107741	G91A Glutamic Acid13Lysine
apolipoprotein E/APOE	NM_0000 41	107741	GAG-GAG844- Glu244/Glu245 849AAG-AAG 244- 245Lys244/Lys 245
apolipoprotein E/APOE	NM_0000 41	107741	T137C Leucine28Prolin e
apolipoprotein E/APOE	NM_0000 41	107741	T388C Cysteine112Arg inine
apolipoprotein E/APOE	NM_0000 41	107741	T761A Valine236Gluta mic Acid
Aromatic L-Amino Acid	M76180	107930	SspI
Decarboxylase/AADC/ dopa decarboxylase			none found
Benzodiazepine receptor, peripheral type	NM_0007 14	109610	
beta-1-adrenergic receptor; Adrb1	J03019	109630	Bgl I.
beta-1-adrenergic	J03019	109630	C1165G ARG389GLY

receptor; Adrb1 beta-adrenergic receptor kinase 1/BARK1	NM_001619	109635	none found	
Beta-Adrenergic Receptor Kinase 2; Adrbk2	X69117	109636	none found	
Beta-2-Adrenergic Receptor; Adrb2	M15169	109690	Fnu4HI	
Beta-2-Adrenergic Receptor; Adrb2	M15169	109690	A-->G -1343	
Beta-2-Adrenergic Receptor; Adrb2	M15169	109690	C-->G -468	
Beta-2-Adrenergic Receptor; Adrb2	M15169	109690	G-->A -1023	
Beta-2-Adrenergic Receptor; Adrb2	M15169	109690	G-->A -654	
Beta-2-Adrenergic Receptor; Adrb2	M15169	109690	T-->A -1429	
Beta-2-Adrenergic Receptor; Adrb2	M15169	109690	T-->C -20	
Beta-2-Adrenergic Receptor; Adrb2	M15169	109690	T-->C -367	
Beta-2-Adrenergic Receptor; Adrb2	M15169	109690	T-->C -47	
Beta-2-Adrenergic Receptor; Adrb2	M15169	109690		ARG16GLY
Beta-2-Adrenergic Receptor; Adrb2	M15169	109690		GLN27GLU
Beta-2-Adrenergic Receptor; Adrb2	M15169	109690		Thr164Ile

Beta-2-Adrenergic Receptor; Adrb2	M15169	109690	val 34 met	
Beta-3-Adrenergic Receptor; Adrb3	X70811	109691	intron 1 g1856t	
Beta-3-Adrenergic Receptor; Adrb3	X70811	109691	TRP64ARG	
serotonin 5-HT receptors 5-HT1A, G	X57829	109760	RsaI	
protein-coupled bradykinin receptor B2/BDKRB2 G	NM_000623	113503	-143C/T	
protein-coupled bradykinin receptor B2/BDKRB2 G	NM_000623	113503	-412C/G	
protein-coupled bradykinin receptor B2/BDKRB2 G	NM_000623	113503	-536C/T	
protein-coupled bradykinin receptor B2/BDKRB2 G	NM_000623	113503	-640T/C	
protein-coupled bradykinin receptor B2/BDKRB2 G	NM_000623	113503	-649insG	
protein-coupled bradykinin receptor B2/BDKRB2 G	NM_000623	113503	-704C/T	
protein-coupled bradykinin receptor B2/BDKRB2 G	NM_000623	113503	-78C/T	
protein-coupled bradykinin receptor	NM_0006	113503	-845C/T	

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B2/BDKRB2 G	23					
protein-coupled						
bradykinin receptor	NM_0006	113503	9 bp de (-)21-29			
B2/BDKRB2 G	23					
protein-coupled						
bradykinin receptor	NM_0006	113503	C>T promoter 54			
B2/BDKRB2 G	23					
protein-coupled						
bradykinin receptor	NM_0006	113503	repeat 3'UTR			
B2/BDKRB2 G	23					
protein-coupled						
bradykinin receptor	NM_0006	113503	tandem repeat near promoter			
B2/BDKRB2 G	23					
protein-coupled						
bradykinin receptor	NM_0006	113503		R14C		
B2/BDKRB2 G	23					
protein-coupled						
bradykinin receptor	NM_0006	113503		T21M		
B2/BDKRB2 G	23					
protein-coupled						
L-type voltage	NM_0007	114205	none found			
dependent calcium	19					
channel alpha 1C						
subunit/CACNA1C						
L-type voltage	NM_0000	114208		ARG1086HIS		
dependent calcium	69					
channel alpha 1S						
subunit/CACNA1S						
L-type voltage	NM_0000	114208		ARG1239GLY		
dependent calcium	69					
channel alpha 1S						

subunit/CACNA1S				
L-type voltage				
dependent calcium				
channel alpha 1S				ARG1239HIS
subunit/CACNA1S				
L-type voltage				
dependent calcium				
channel alpha 1S				ARG528HIS
subunit/CACNA1S				
calpain, large				
polypeptide				ARG572GLN
L3/CAPN3				
calpain, large				
polypeptide				ARG110TER
L3/CAPN3				
calpain, large				
polypeptide				ARG769GLN
L3/CAPN3				
calpain, large				
polypeptide				PRO319LEU
L3/CAPN3				
calpain, large				
polypeptide				SER86PHE
L3/CAPN3				
cannabinoid receptor				
1/G protein-				1359G-->A silent
coupled/CNR1				
Catechol-O-				
Methyltransferase				186C > T at exon 3
Catechol-O-				408C > G at exon 4
Methyltransferase				

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Catechol-O-Methyltransferase	M58525	116790	472G > A at exon 4	
Catechol-O-Methyltransferase	M58525	116790	597G > A at exon 5	
Catechol-O-Methyltransferase	M58525	116790	821-827insC at the 3'	
Catechol-O-Methyltransferase	M58525	116790	BglI	
Catechol-O-Methyltransferase	M58525	116790	C256G silent	
Catechol-O-Methyltransferase	M58525	116790	G/A1947	
Catechol-O-Methyltransferase	M58525	116790	MspI	
Catechol-O-Methyltransferase	M58525	116790	NlaIII	
Catechol-O-Methyltransferase	M58525	116790	val-108-met	
Catechol-O-Methyltransferase	M58525	116790	Val158-->Met	
cathepsin B/b-aCTSBmyloid precursor protein secretase/CTSB	M14221	116810	10-bp insertion in the 3'-UT	
cathepsin B/b-aCTSBmyloid precursor protein secretase/CTSB	M14221	116810	CYS26ARG	
cathepsin B/b-aCTSBmyloid precursor protein	M14221	116810	EcoRI	

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secretase/CTSB cathepsin B/b- aCTSBmyloid precursor protein secretase/CTSB	M14221	116810	TaqI	
Cholecystokinin A receptor/CCKAR	L13605	118444	GLY21ARG	
Cholecystokinin A receptor/CCKAR	L13605	118444	VAL365ILE	
Cholecystokinin B receptor/CCKBR	L08112	118445	1550 G-->A Val125-->Ile	
Cholecystokinin B receptor/CCKBR	L08112	118445	CAT 207 CAC His207His	
Cholecystokinin B receptor/CCKBR	L08112	118445	Arg215His	
Cholecystokinin B receptor/CCKBR	L08112	118445	Val138Met	
plasma cholesterol ester transfer protein/CETP	NM_0000 78	118470	A1503G	
plasma cholesterol ester transfer protein/CETP	NM_0000 78	118470	G-A splice junction alternative splice	
plasma cholesterol ester transfer protein/CETP	NM_0000 78	118470	G1696A	
plasma cholesterol ester transfer protein/CETP	NM_0000 78	118470	C-T transition in intron 12	
plasma cholesterol ester transfer	NM_0000 78	118470	EcoNI	

protein/CETP plasma cholesterol ester transfer	NM_0000 78	118470	G-->A intron 14
protein/CETP plasma cholesterol ester transfer	NM_0000 78	118470	G-A transition in intron 15
protein/CETP plasma cholesterol ester transfer	NM_0000 78	118470	G1533A
protein/CETP plasma cholesterol ester transfer	NM_0000 78	118470	INST alternative (intron/exon14) splice
protein/CETP plasma cholesterol ester transfer	NM_0000 78	118470	StuI
protein/CETP plasma cholesterol ester transfer	NM_0000 78	118470	T-->G tyr57stop
protein/CETP plasma cholesterol ester transfer	NM_0000 78	118470	TaqIA
protein/CETP plasma cholesterol ester transfer	NM_0000 78	118470	TaqIB in intron 1
protein/CETP plasma cholesterol ester transfer	NM_0000 78	118470	268 Arg-- >STOP
protein/CETP plasma cholesterol ester transfer	NM_0000 78	118470	Asp 442 to Gly

plasma cholesterol ester transfer protein/CETP	NM_0000 78	118470	ASP442GLY
plasma cholesterol ester transfer protein/CETP	NM_0000 78	118470	G181X
plasma cholesterol ester transfer protein/CETP	NM_0000 78	118470	I405V
plasma cholesterol ester transfer protein/CETP	NM_0000 78	118470	Lys309-Stop
plasma cholesterol ester transfer protein/CETP	NM_0000 78	118470	R451Q
plasma cholesterol ester transfer protein/CETP	NM_0000 78	118470	Val421-Ile
Choline acyltransferase/CHA T	NM_0030 55	118490	none found
Cholinergic Receptor, Muscarinic, 2; CHRM2	U19800	118493	none found
Cholinergic Receptor, Muscarinic, 3; CHRM3	U29589	118494	none found
Cholinergic Receptor, Muscarinic, 4; CHRM4	M16405	118495	SstI
Cholinergic Receptor, Muscarinic, 5; CHRM5	AF026263	118496	none found
Nicotinic, Cholinergic receptor alpha 2	U62431	118502	none found

Nicotinic, Cholinergic receptor alpha 3	X53559	118503	none found	
Nicotinic, Cholinergic receptor alpha 4	U62433	118504	3-BP INS, 776GCT	
Nicotinic, Cholinergic receptor alpha 4	U62433	118504	CfoI exon 5	
Nicotinic, Cholinergic receptor alpha 4	U62433	118504	Dinucleotide intron 1	
Nicotinic, Cholinergic receptor alpha 4	U62433	118504	fokI	
Nicotinic, Cholinergic receptor alpha 4	U62433	118504	PvuII	
Nicotinic, Cholinergic receptor alpha 4	U62433	118504		SER-TER
Nicotinic, Cholinergic receptor alpha 4	U62433	118504		SER248PHE
Nicotinic, Cholinergic receptor alpha 5	M83712	118505	none found	
Nicotinic, Cholinergic receptor beta 2	Y08415	118507	none found	
Nicotinic, Cholinergic receptor beta 3	X67513	118508	none found	
Nicotinic, Cholinergic receptor beta 4	X68275	118509	none found	
Cholinergic Receptor, Muscarinic, 1; CHRM1	X15263	118510	none found	
Nicotinic, Cholinergic receptor alpha 7	U40583	118511	none found	
ciliary neurotrophic factor receptor/CNTRF	NM_001842	118946	none found	
Corticotropin releasing	U16273	122561	none found	

hormone receptor 1 diazepam binding inhibitor/DBI	M15887	125950	none found
Human dihydrofolate reductase gene	J00140	126060	
Dopamine Receptor D1	X58987	126449	C/T Isoleucine49
Dopamine Receptor D2	X51362	126450	141 C ins/del
Dopamine Receptor D2	X51362	126450	A241G
Dopamine Receptor D2	X51362	126450	NcoI RFLP
Dopamine Receptor D2	X51362	126450	TaqI A, TaqI B, TaqI D, and (CA) _n STRP
Dopamine Receptor D2	X51362	126450	Serine 311Cysteine
Dopamine Receptor D3	U32499	126451	exonic Ball
Dopamine Receptor D3	U32499	126451	polymorphism
Dopamine Receptor D3	U32499	126451	intronic MspI
Dopamine Receptor D3	U32499	126451	polymorphism
Dopamine Receptor D4	L12398	126452	Serine9Glycine
Dopamine Receptor D4	L12398	126452	12 bp duplication/deletion in exon 1
Dopamine Receptor D4	L12398	126452	12 bp tandem repeat in extracellular N- terminal part of receptor
Dopamine Receptor D4	L12398	126452	12 bp VNTR in exon 1
Dopamine Receptor D4	L12398	126452	48 bp VNTR in exon 3
Dopamine Receptor D4	L12398	126452	48 bp VNTR in exon

Dopamine Receptor D4	L12398	126452	3 48 bp VNTR in exon 3
Dopamine Receptor D4	L12398	126452	48 bp VNTR in third cytoplasmic loop
Dopamine Receptor D4	L12398	126452	exon 1 -- nondeleted sequence in 13bp deletion site
Dopamine Receptor D4	L12398	126452	exon 3 (48 bp repeat)
Dopamine Receptor D4	L12398	126452	exon 3 (position 194) -- common valine producing T at glycine subst site
Dopamine Receptor D4	L12398	126452	poly G in intron 1
Dopamine Receptor D4	L12398	126452	SmaI cutting site (bands of 413bp and 302bp) in 5' noncoding region
Dopamine Receptor D4	L12398	126452	SmaI RFLP in 5' noncoding region
Dopamine Receptor D5	M67439	126453	(TC)n
Dopamine Receptor D5	M67439	126453	dinucleotide repeat
Dopamine Receptor D5	M67439	126453	poly (CT/GT/GA)n
Dopamine Receptor D5	M67439	126453	T978C P326P
Dopamine Receptor D5	M67439	126453	transmembrane L88F domain II
Dopamine Transporter/ DAT1	L24178	126455	40-bp VNTR in the 3'-untranslated
Dopamine Transporter/ DAT1	L24178	126455	5' TaqI RFLP

Dopamine Transporter/ DAT1	L24178	126455	9-repeat allele
estrogen receptor 1 (ESR1)	M12674	133430	RFLP (PstI enzyme)
estrogen receptor 1 (ESR1)	M12674	133430	RFLP (PvuII enzyme)
Solute Carrier Family 1, Member 1; SLC11	U08989	133550	none found
Gamma-Aminobutyric Acid Receptor, Alpha- 2; Gabra2	S62907	137140	none found
Gamma-Aminobutyric Acid Receptor, Alpha- 4; Gabra4	U30461	137141	none found
Gamma-Aminobutyric Acid Receptor, Alpha- 5; Gabra5	L08485	137142	Dinucleotide repeat
Gamma-Aminobutyric Acid Receptor, Alpha- 6; Gabra6	S81944	137143	none found
GABA-glutamate transaminase	NM_0006 63	137150	3' DELETION
GABA-glutamate transaminase	NM_0006 63	137150	ARG220LYS
Gamma-Aminobutyric Acid Receptor, Alpha- 1; Gabra1	X14766	137160	Dinucleotide repeat
Gamma-Aminobutyric Acid Receptor Subunit Rho1	M62400	137161	PstI
Gamma-Aminobutyric	M86868	137162	none found

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Acid Receptor Subunit Rho2	AF016917	137163	none found
Gamma-Aminobutyric Acid Receptor, Delta;			
Gabrd			
Gamma-Aminobutyric Acid	X15376	137164	Ncil
Receptor, Gamma-2;			
Gabrg2			
Solute carrier family 6 (GABA), member 1/SLC6A1	X54673	137165	none found
Gamma-Aminobutyric Acid	*****	137166	none found
Receptor, Gamma-1;			
Gabrg1			
Gamma-Aminobutyric Acid Receptor, Beta-1;	X14767	137190	C-->G his396glu
Gabrb1			
Gamma-Aminobutyric Acid Receptor, Beta-3;	M82919	137192	Dinucleotide repeat
Gabrb3			
glucagon-like peptide 1 receptor/GLPIR	U01156	138032	silent substitution in exon 6
glucagon-like peptide 1 receptor/GLPIR	U01156	138032	simple tandem repeat DNA polymorphism
glucagon receptor/GCGR	NM_000160	138033	Alu-repeat
glucagon receptor/GCGR	NM_000160	138033	GLY40SER

Glutamate dehydrogenase 1	X07674	138130	G/A at nt 955	
Glutamate dehydrogenase 1	X07674	138130	TagI	
Glutamate dehydrogenase 1	X07674	138130		GLY446ASP
Glutamate dehydrogenase 1	X07674	138130		GLY446SER
Glutamate dehydrogenase 1	X07674	138130		HIS454TYR
Glutamate dehydrogenase 1	X07674	138130		SER445LEU
Glutamate dehydrogenase 1	X07674	138130		SER448PRO
mitochondrial glutamate oxaloacetate transaminase 2/GOT2	NM_002080	138150	none found	
soluble glutamate oxaloacetate transaminase 1/GOT1	NM_002079	138180	none found	
Glutamate Receptor, Ionotropic, Kainate 3; Grik3	U16127	138243	none found	
Glutamate Receptor, Ionotropic, Kainate 2; Grik2	S75105	138244	trinucleotide repeat 3'	
Glutamate Receptor, Ionotropic, Kainate 1; Grik1	U16125	138245	none found	
Glutamate Receptor, Ionotropic, Ampa 4;	NM_000829	138246	none found	

Gria4	L20814	138247	none found
Glutamate Receptor, Ionotropic, Ampa 2;			
Gria2	M64752	138248	none found
Glutamate Receptor, Ionotropic, Ampa 1;			
Gria1	L13266	138249	none found
Glutamate Receptor, Ionotropic, N-Methyl- D-Asp 1; Grin1			
Glutamate Receptor, Ionotropic, N-Methyl- D-Asp A; Grina	*****	138251	none found
Glutamate Receptor, Ionotropic, N-Methyl- D-Asp 2b; Grin2b	U28758	138252	none found
Glutamate Receptor, Ionotropic, N-Methyl- D-Asp 2a; Grin2a	U09002	138253	none found
Glutamate Receptor, Ionotropic, N-Methyl- D-Asp 2c; Grin2c	L76224	138254	none found
Glutamate decarboxylase 2 (brain, 65kD)	X69936	138275	(CA) repeat polymorphism
Glutamate decarboxylase 3		138276	none found
Glycine Receptor, Alpha-1 Subunit; Glra1	X52009	138491	null allele
Glycine Receptor, Alpha-1 Subunit; Glra1	X52009	138491	ARG271GLN

Glycine Receptor, Alpha-1 Subunit; Glra1	X52009	138491	ARG271LEU
Glycine Receptor, Alpha-1 Subunit; Glra1	X52009	138491	GLN266HIS
Glycine Receptor, Alpha-1 Subunit; Glra1	X52009	138491	ILE244ASN
Glycine Receptor, Alpha-1 Subunit; Glra1	X52009	138491	LYS276GLU
Glycine Receptor, Alpha-1 Subunit; Glra1	X52009	138491	P250T
Glycine Receptor, Alpha-1 Subunit; Glra1	X52009	138491	TYR279CYS
Glycine Receptor, Beta Subunit; Glrb	U33267	138492	none found
gonadotropin releasing hormone receptor/G protein- coupled/LHRHR/GNR HR	NM_0004 06	138850	ARG262GLN
gonadotropin releasing hormone receptor/G protein- coupled/LHRHR/GNR HR	NM_0004 06	138850	GLN106ARG
gonadotropin releasing hormone receptor/G protein- coupled/LHRHR/GNR HR	NM_0004 06	138850	Mae III
gonadotropin releasing hormone receptor/G	NM_0004 06	138850	TYR284CYS

protein-coupled/LHRHR/GNRHR	U34195	139191	IVS8DS, G-C, -1 alternative splice
growth hormone releasing hormone receptor/G protein-coupled/GHRHR	U34195	139191	1-BP DEL frameshift
growth hormone releasing hormone receptor/G protein-coupled/GHRHR	U34195	139191	2-BP DEL frameshift
growth hormone releasing hormone receptor/G protein-coupled/GHRHR	U34195	139191	C to T codon 236. silent
growth hormone releasing hormone receptor/G protein-coupled/GHRHR	U34195	139191	EX4,6DEL
growth hormone releasing hormone receptor/G protein-coupled/GHRHR	U34195	139191	GAA180GAG silent
growth hormone releasing hormone receptor/G protein-coupled/GHRHR	U34195	139191	IVS4DS, G-A, +1 alternative splice

growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	IVS6AS, G-T, -1	
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	IVS8AS, G-C, -1	
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	IVS9DS, G-A, +1 frameshift	
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	P561T	
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	ARG161CYS	
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	ARG217TER	
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	ARG43TER	
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	ASP152HIS	

coupled/GHRHR growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	CYS38TER
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	GLN154PRO
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	GLU224ASP
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	GLU224TER
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	GLU44LYS
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	ILE153THR
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	PHE96SER
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	PRO131GLN

receptor/G protein-coupled/GHRHR growth hormone releasing hormone	U34195	139191	VAL144ILE
receptor/G protein-coupled/GHRHR growth hormone releasing hormone	U34195	139191	VAL155GLY
receptor/G protein-coupled/GHRHR			
Histamine receptor H2	M64799	142703	A649G
Histidine	M60445	142704	none found
Decarboxylase			
HMGCoA reductase/HMGCR	NM_000859	142910	HgiAl
HMGCoA reductase/HMGCR	NM_000859	142910	ScrFI polymorphism in the 2nd intron
Superoxide Dismutase 1/SOD1 (soluble)	NM_000454	147450	T-G, -10, 9-BP INS
Superoxide Dismutase 1/SOD1 (soluble)	NM_000454	147450	VS4AS, A-G, -11
Superoxide Dismutase 1/SOD1 (soluble)	NM_000454	147450	ALA145THR
Superoxide Dismutase 1/SOD1 (soluble)	NM_000454	147450	ALA4THR
Superoxide Dismutase 1/SOD1 (soluble)	NM_000454	147450	ALA4VAL
Superoxide Dismutase 1/SOD1 (soluble)	NM_000454	147450	ASP90ALA
Superoxide Dismutase 1/SOD1 (soluble)	NM_000454	147450	CYS6PHE

Superoxide Dismutase 1/SOD1 (soluble)	NM_0004 54	147450	GLU100GLY
Superoxide Dismutase 1/SOD1 (soluble)	NM_0004 54	147450	GLU21LYS
Superoxide Dismutase 1/SOD1 (soluble)	NM_0004 54	147450	GLY16SER
Superoxide Dismutase 1/SOD1 (soluble)	NM_0004 54	147450	GLY37ARG
Superoxide Dismutase 1/SOD1 (soluble)	NM_0004 54	147450	GLY41ASP
Superoxide Dismutase 1/SOD1 (soluble)	NM_0004 54	147450	GLY41SER
Superoxide Dismutase 1/SOD1 (soluble)	NM_0004 54	147450	GLY72SER
Superoxide Dismutase 1/SOD1 (soluble)	NM_0004 54	147450	GLY85ARG
Superoxide Dismutase 1/SOD1 (soluble)	NM_0004 54	147450	GLY93ALA
Superoxide Dismutase 1/SOD1 (soluble)	NM_0004 54	147450	GLY93CYS
Superoxide Dismutase 1/SOD1 (soluble)	NM_0004 54	147450	HIS43ARG
Superoxide Dismutase 1/SOD1 (soluble)	NM_0004 54	147450	HIS46ARG
Superoxide Dismutase 1/SOD1 (soluble)	NM_0004 54	147450	ILE104THE
Superoxide Dismutase 1/SOD1 (soluble)	NM_0004 54	147450	ILE113THR
Superoxide Dismutase 1/SOD1 (soluble)	NM_0004 54	147450	LEU106VAL
Superoxide Dismutase 1/SOD1 (soluble)	NM_0004 54	147450	LEU126TER

1/SOD1 (soluble)	54				
Superoxide Dismutase	NM_0004	147450		LEU144SER	
1/SOD1 (soluble)	54				
Superoxide Dismutase	NM_0004	147450		LEU38VAL	
1/SOD1 (soluble)	54				
Superoxide Dismutase	NM_0004	147450		LEU84VAL	
1/SOD1 (soluble)	54				
Superoxide Dismutase	NM_0004	147450		SER134ASN	
1/SOD1 (soluble)	54				
Superoxide Dismutase	NM_0004	147450		THR151ILE	
1/SOD1 (soluble)	54				
Superoxide Dismutase	NM_0004	147450		Val7-->Glu	
1/SOD1 (soluble)	54				
Superoxide dismutase	X02317	147450			
1 (Cu/Zn)					
Superoxide Dismutase	X65965	147460		ALA16VAL	
2/SOD2					
(mitochondrial)					
Human clone pSK1	U05875	147569		Gln64Arg	
interferon gamma					
receptor accessory					
factor-1 (AF-1)					
mRNA, complete cds					
MICROTUBULE-	J03778	157140		+39deltaG iron 4	
ASSOCIATED					
PROTEIN TAU					
MICROTUBULE-	J03778	157140		IVS10, A-G, +13	
ASSOCIATED					
PROTEIN TAU					
MICROTUBULE-	J03778	157140		IVS10, C-U, +14	
ASSOCIATED					

PROTEIN TAU	J03778	157140	IVS10, C-U, +16	
MICROTUBULE-ASSOCIATED				
PROTEIN TAU	J03778	157140	IVS10, G-A, +1	
MICROTUBULE-ASSOCIATED				
PROTEIN TAU	J03778	157140		ARG406TRP
MICROTUBULE-ASSOCIATED				
PROTEIN TAU	J03778	157140		ASN279LYS
MICROTUBULE-ASSOCIATED				
PROTEIN TAU	J03778	157140		GLY272VAL
MICROTUBULE-ASSOCIATED				
PROTEIN TAU	J03778	157140		PRO301LEU
MICROTUBULE-ASSOCIATED				
PROTEIN TAU	J03778	157140		SER305ASN
MICROTUBULE-ASSOCIATED				
PROTEIN TAU	J03778	157140		VAL337MET
MICROTUBULE-ASSOCIATED				
PROTEIN TAU	NM_0025	162010	HincII	
nerve growth factor receptor/NGFR	07			
nerve growth factor receptor/NGFR	NM_0025	162010	HindIII	
nerve growth factor receptor/NGFR	07			
nerve growth factor receptor/NGFR	NM_0025	162010	Two TaqI sites	
nerve growth factor receptor/NGFR	07			

nerve growth factor receptor/NGFR	NM_0025 07	162010	Xmnl	
H.sapiens encoding PC1/PC3	X64810	162150	IVS5DS, A-C, +4	
H.sapiens encoding PC1/PC3	X64810	162150		GLY483ARG
Tachykinin NK2 receptor/TACR2	M57414	162321	none found	
Tachykinin NK1 receptor/TACR1	M81797	162323	none found	
Tachykinin NK3 receptor/TACR3	M89473	162332	none found	
neuromedin B receptor/g protein- coupled/NMBR	*****	162341	none found	
Neuropeptide Y	K01911	162640		LEU7PRO
Neuropeptide Y receptor Y1/NPY1R	M84755	162641	none found	
Neuropeptide Y receptor Y2/NPY2R	U32500	162642	none found	
Neuropeptide Y receptor Y3/chemokine receptor 4/CXCR4	X71635	162643	none found	
Neurotensin receptor	X70070	162651	Tetranucleotide repeat	
Human AD amyloid mRNA, complete cds	L08850	163890	Dinucleotide repeat	
Human AD amyloid mRNA, complete cds	L08850	163890		ALA30PRO
Human AD amyloid mRNA, complete cds	L08850	163890		ALA53THR

Human AD amyloid mRNA, complete cds	L08850	163890	G209A
Solute carrier family 6, NM_001043 member		163970	none found
5/SLC6A2/NAT1/NET 1 (glycine)			
Human obese (ob) mRNA, complete cds	U18915	164160	-1387 G/A
Human obese (ob) mRNA, complete cds	U18915	164160	1-BP DEL frameshift
Human obese (ob) mRNA, complete cds	U18915	164160	A --> G + 19 exon1
Human obese (ob) mRNA, complete cds	U18915	164160	C(-188)A
Human obese (ob) mRNA, complete cds	U18915	164160	ARG105TRP
Human obese (ob) mRNA, complete cds	U18915	164160	Glu-126-Gln
Human obese (ob) mRNA, complete cds	U18915	164160	Ser-91-Ser
Opioid Receptor, Delta-1; Oprd1	U10504	165195	T to C in codon 307 silent
Opioid Receptor, Kappa-1; Oprk1	U17298	165196	none found
Oxytocin receptor	X64878	167055	C to T exon 3
Oxytocin receptor	X64878	167055	CA repeat
Human peptidylglycine alpha-amidating monooxygenase	M37721	170270	none found
mRNA, complete cds			
Phenol-preferring	NM_0010	171150	Arg213His

sulfotransferase, family 1A, member 1/SULT1A1	55			
phenylethanolamine N-methyltransferase/PNMT	NM_002686	171190	BANI	
phospholipid transfer protein/PLTP	NM_006227	172425	TaqIB	
Methylenetetrahydrofolate cyclohydrolase	J04031	172460		ARG293HIS
prolactin receptor/PRLR	NM_000949	176761	none found	
Adrenocorticotrophic hormone (ACTH)	M28636	176830	3804C-A	
Adrenocorticotrophic hormone (ACTH)	M28636	176830	7013G-T	
Adrenocorticotrophic hormone (ACTH)	M28636	176830	7133C DEL	
butyrylcholinesterase 1/serum cholinesterase 1/BCHE1	NM_000055	177400	209 A/G Asp-70 to Gly	
butyrylcholinesterase 1/serum cholinesterase 1/BCHE1	NM_000055	177400	342-bp Alu in exon two	
butyrylcholinesterase 1/serum cholinesterase 1/BCHE1	NM_000055	177400	A-to-G Y128C	
butyrylcholinesterase 1/serum cholinesterase 1/BCHE1	NM_000055	177400	GCA to ACA	ALA539THR
butyrylcholinesterase 1/BCHE1	NM_000055	177400	GGT to GTT Gly 390 to Val	

1/serum cholinesterase	55				
1/BC:HE1					
butyrylcholinesterase	NM_0000	177400	GGT-to-GGAG Gly 117		
1/serum cholinesterase	55		Frameshift		
1/BC:HE1					
butyrylcholinesterase	NM_0000	177400	E451X		
1/serum cholinesterase	55				
1/BC:HE1					
butyrylcholinesterase	NM_0000	177400	F446V		
1/serum cholinesterase	55				
1/BC:HE1					
butyrylcholinesterase	NM_0000	177400	G365R		
1/serum cholinesterase	55				
1/BC:HE1					
butyrylcholinesterase	NM_0000	177400	GLU497VAL		
1/serum cholinesterase	55				
1/BC:HE1					
butyrylcholinesterase	NM_0000	177400	Gly115 by Asp		
1/serum cholinesterase	55				
1/BC:HE1					
butyrylcholinesterase	NM_0000	177400	LEU330ILE		
1/serum cholinesterase	55				
1/BC:HE1					
butyrylcholinesterase	NM_0000	177400	Q119X		
1/serum cholinesterase	55				
1/BC:HE1					
butyrylcholinesterase	NM_0000	177400	R515C		
1/serum cholinesterase	55				
1/BC:HE1					
butyrylcholinesterase	NM_0000	177400	THR243MET		
1/serum cholinesterase	55				

1/B ₅ HE1				THR250PRO	
butyrylcholinesterase	NM_0000	177400			
1/serum cholinesterase	55				
1/B ₅ HE1					
butyrylcholinesterase	NM_0000	177400			
1/serum cholinesterase	55				
1/B ₅ HE1					
butyrylcholinesterase	*****	177500		none found	
2/serum cholinesterase					
2/B ₅ HE2					
retinoic acid receptor	M57707	180190		none found	
gamma/RARG					
retinoic acid receptor	NM_0009	180220		none found	
beta RARB	65				
retinoic acid receptor	NM_0009	180240		7-base deletion frameshift	
alpha/RARA	64				
retinoic acid receptor	NM_0009	180240		codon 411 C to T	
alpha/RARA	64				
retinoic acid receptor	NM_0009	180240		Arg272Gln	
alpha/RARA	64				
retinoic acid receptor	NM_0009	180240		Met297Leu	
alpha/RARA	64				
retinoic acid receptor	NM_0029	180245		none found	
alpha/RXRA	57				
retinoic acid receptor	X66424	180246		none found	
beta RXRB					
retinoic acid receptor	U38480	180247		none found	
gamma/RXRG					
serotonin 5-HT	M81590	182131		C129T	
receptors 5-HT1B, G					
protein-coupled					

serotonin 5-HT receptors 5-HT1B, G protein-coupled	M81590	182131	G861C	
serotonin 5-HT receptors 5-HT1E, G protein-coupled	M91467	182132	none found	
serotonin 5-HT receptors 5-HT1D, G protein-coupled	M81590	182133		silent polymorphism
serotonin 5-HT receptors 5-HT1F, G protein-coupled	L05597	182134	none found	
serotonin 5-HT receptors 5-HT2A, G protein-coupled	D87030	182135	-1438G/A	
serotonin 5-HT receptors 5-HT2A, G protein-coupled	D87030	182135	102T-C	
serotonin 5-HT receptors 5-HT2A, G protein-coupled	D87030	182135	HpaII	
serotonin 5-HT receptors 5-HT2A, G protein-coupled	D87030	182135		His452Tyr
serotonin 5-HT receptors 5-HT7, G protein-coupled	L21195	182137	none found	
serotonin transporter	X70697	182138		PstI
serotonin transporter	X70697	182138	promoter 44-bp ins/del	
serotonin transporter	X70697	182138	tandem repeat close	

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serotonin transporter	X70697	182138	to the promoter two polyadenylation sites
serotonin transporter	X70697	182138	VNTR intron 2
serotonin transporter	X70697	182138	silent polymorphism
serotonin 5-HT receptors 5-HT3, gated ion channel	D49394	182139	none found
type I voltage dependent sodium channel alpha	S71446	182389	none found
subunit/SCN1A			
type II voltage dependent sodium channel alpha 1	M94055	182390	none found
subunit/SCN2A1			
type III voltage dependent sodium channel alpha	S69887	182391	none found
subunit/SCN3A			
type VI voltage dependent sodium channel alpha	M55662	182392	none found
subunit/SCN6A			
Somatostatin receptor 1/G protein-coupled	M81829	182451	(CA) _n 5'
Somatostatin receptor 2	M81830	182452	TRP188TER
Somatostatin receptor 3/adenyl cyclase coupled	M96738	182453	none found

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Gene	Accession	Position	Sequence	Notes
Somatostatin receptor 4	L07833	182454	none found	
Somatostatin receptor 5	D16827	182455	2 RFLP's promoter	
human rapamycin-binding protein (FKBP-13) mRNA, complete cds	M65128	186946	none found	
thyrotropin releasing hormone receptor/G protein coupled/TRHR	X75071	188545	9-BP DEL	deletion of 3 amino acids
thyrotropin releasing hormone receptor/G protein coupled/TRHR	X75071	188545		ALA118THR
thyrotropin releasing hormone receptor/G protein coupled/TRHR	X75071	188545		ARG171TER
oncogene ERBB3/HER3	NM_001982	190151	none found	
tryptophan Hydroxylase; TPH	X52836	191060	-5806G>T	
tryptophan Hydroxylase; TPH	X52836	191060	-6526A>G	
tryptophan Hydroxylase; TPH	X52836	191060	-7065C>T	
tryptophan Hydroxylase; TPH	X52836	191060	7180T>G	
tryptophan Hydroxylase; TPH	X52836	191060	A218C in intron 7	
tryptophan Hydroxylase; TPH	X52836	191060	A779C	
tryptophan Hydroxylase; TPH	X52836	191060	A779C in intron 7	

tryptophan	X52836	191060	T1095C
Hydroxylase; TPH			
Human tryptophan	U32989	191070	6G-->T intron
oxygenase (TDO)			
mRNA, complete cds			
Human tryptophan	U32989	191070	CCCCT repeat
oxygenase (TDO)			
mRNA, complete cds			
Human tryptophan	U32989	191070	GTT repeat
oxygenase (TDO)			
mRNA, complete cds			
tyrosine Hydroxylase	X05290	191290	(TCAT) _n intron 1
tyrosine Hydroxylase	X05290	191290	BglII
tyrosine Hydroxylase	X05290	191290	DraI
tyrosine Hydroxylase	X05290	191290	PstI
tyrosine Hydroxylase	X05290	191290	ScaI
tyrosine Hydroxylase	X05290	191290	T-229A
tyrosine Hydroxylase	X05290	191290	[AATG] _n
tyrosine Hydroxylase	X05290	191290	ARG233HIS
tyrosine Hydroxylase	X05290	191290	GLN381LYS
tyrosine Hydroxylase	X05290	191290	LEU205PRO
tyrosine Hydroxylase	X05290	191290	Val468Met
tyrosine Hydroxylase	X05290	191290	Val81Met
neurotrophic tyrosine	Y09033	191315	1-BP DEL, 1726C frameshift
kinase receptor type			
1/NTRK1			
neurotrophic tyrosine	Y09033	191315	1810C>T
kinase receptor type			
1/NTRK1			
neurotrophic tyrosine	Y09033	191315	1838G>T
kinase receptor type			

1/NTRK1 neurotrophic tyrosine kinase receptor type 1/NTRK1	Y09033	191315	G1795C GLY571ARG
neurotrophic tyrosine kinase receptor type 1/NTRK1	Y09033	191315	IVS4, G-C, -1
neurotrophic tyrosine kinase receptor type 1/NTRK1	Y09033	191315	IVSDS, A-C, +3
neurotrophic tyrosine kinase receptor type 1/NTRK1	Y09033	191315	ARG774PRO
neurotrophic tyrosine kinase receptor type 1/NTRK1	Y09033	191315	ARG85SER]
neurotrophic tyrosine kinase receptor type 1/NTRK1	Y09033	191315	GLN9TER
neurotrophic tyrosine kinase receptor type 1/NTRK1	Y09033	191315	GLY607VAL
neurotrophic tyrosine kinase receptor type 1/NTRK1	Y09033	191315	HIS598TYR
neurotrophic tyrosine kinase receptor type 1/NTRK1	NM_0025 30	191316	none found
vasoactive intestinal peptide receptor 1/VIPR1	***** 3/NTRK3	192321	none found

Vesicular Amine Transporter 2; VAT2	L09118	193001	TaqI	
Vesicular Amine Transporter 1; VAT1	*****	193002	none found	
melanocortin 2 receptor/ACTH	NM_0005 29	202200	1-BP INS frameshift	
receptor/MC2R melanocortin 2 receptor/ACTH	NM_0005 29	202200	ARG128CYS	
receptor/MC2R melanocortin 2 receptor/ACTH	NM_0005 29	202200	ARG201TER	
receptor/MC2R melanocortin 2 receptor/ACTH	NM_0005 29	202200	ASP107ASN	
receptor/MC2R melanocortin 2 receptor/ACTH	NM_0005 29	202200	CYS251PHE	
receptor/MC2R melanocortin 2 receptor/ACTH	NM_0005 29	202200	SER120ARG	
receptor/MC2R melanocortin 2 receptor/ACTH	NM_0005 29	202200	SER74ILE	
dopamine beta hydroxylase	Y00096	223360		
glutamate formiminotransferase/d ihydrofolate synthetase	*****	229100	none found	
5,10-	U09806	236250	1027T-G	

@METHYLENETET RAHYDROFOLATE REDUCTASE 5,10-	U09806	236250	1084C-T
@METHYLENETET RAHYDROFOLATE REDUCTASE 5,10-	U09806	236250	1298A-C
@METHYLENETET RAHYDROFOLATE REDUCTASE 5,10-	U09806	236250	1711C-T
@METHYLENETET RAHYDROFOLATE REDUCTASE 5,10-	U09806	236250	677C-T ala --> val
@METHYLENETET RAHYDROFOLATE REDUCTASE 5,10-	U09806	236250	983A-G
@METHYLENETET RAHYDROFOLATE REDUCTASE 5,10-	U09806	236250	exon 7 Ala-->Glu
@METHYLENETET RAHYDROFOLATE REDUCTASE 5,10-	U09806	236250	A225V

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@METHYLENETETRAHYDROFOLATE REDUCTASE	5,10-	U09806	236250	ARG158GLN
@METHYLENETETRAHYDROFOLATE REDUCTASE	5,10-	U09806	236250	ARG184TER
Glycine cleavage system: Protein T		D13811	238310	1-BP DEL, 183C
Glycine cleavage system: Protein T		D13811	238310	ASP276HIS
Glycine cleavage system: Protein T		D13811	238310	GLY269ASP
Glycine cleavage system: Protein T		D13811	238310	GLY47ARG
Glycine cleavage system: Protein T		D13811	238310	HIS42ARG
6-pyruvoyl tetrahydrobiopterin synthase/PTPS		Q03393	261640	14-BP DEL K120-->Stop
6-pyruvoyl tetrahydrobiopterin synthase/PTPS		Q03393	261640	ARG16CYS
6-pyruvoyl tetrahydrobiopterin synthase/PTPS		Q03393	261640	ARG25GLN
6-pyruvoyl tetrahydrobiopterin synthase/PTPS		Q03393	261640	ASN47ASP
6-pyruvoyl tetrahydrobiopterin synthase/PTPS		Q03393	261640	ASN52SER

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tetrahydrobiopterin synthase/PTPS 6-pyruvoyl	Q03393	261640	ASP116GLY
tetrahydrobiopterin synthase/PTPS 6-pyruvoyl	Q03393	261640	ASP96ASN
tetrahydrobiopterin synthase/PTPS 6-pyruvoyl	Q03393	261640	D136V
tetrahydrobiopterin synthase/PTPS 6-pyruvoyl	Q03393	261640	K129E
tetrahydrobiopterin synthase/PTPS 6-pyruvoyl	Q03393	261640	PRO87SER
tetrahydrobiopterin synthase/PTPS 6-pyruvoyl	Q03393	261640	T67M
tetrahydrobiopterin synthase/PTPS 6-pyruvoyl	Q03393	261640	VAL56MET
Glutamate decarboxylase 1 (brain, 67kD)	M81883	266100	none found
Human hydroxyindole- O-methyltransferase promoter A-derived (HIOMT) mRNA, complete cds	U11090	300015	none found

angiotensin II receptor type 2/AGTR2	U10273	300034	none found
P2Y4 pyrimidinergic receptor/Ci protein- coupled	NM_0025 65	300038	none found
Gamma-Aminobutyric Acid Receptor, Epsilon; Gabre	Y09765	300093	none found
bombesin-like receptor 3/BRS3	NM_0017 27	300107	none found
Glutamate dehydrogenase 2	U08997	300144	none found
ACETYL SEROTONI N	300162	300162	none found
METHYLTRANSFER ASE-LIKE			
Arginine vasopressin receptor 2	AF030626	304800	1-BP DEL
Arginine vasopressin receptor 2	AF030626	304800	1-BP DEL, 102G
Arginine vasopressin receptor 2	AF030626	304800	1-BP INS frameshift
Arginine vasopressin receptor 2	AF030626	304800	1-BP INS 804 frameshift
Arginine vasopressin receptor 2	AF030626	304800	15delC
Arginine vasopressin receptor 2	AF030626	304800	28-bp del
Arginine vasopressin receptor 2	AF030626	304800	786delG frameshift
Arginine vasopressin	AF030626	304800	CpG dinucleotides

receptor 2	ALA132ASP
Arginine vasopressin receptor 2	
Arginine vasopressin receptor 2	ARG181CYS
Arginine vasopressin receptor 2	
Arginine vasopressin receptor 2	ARG113TRP
Arginine vasopressin receptor 2	
Arginine vasopressin receptor 2	ARG203CYS
Arginine vasopressin receptor 2	
Arginine vasopressin receptor 2	ARG337TER
Arginine vasopressin receptor 2	
Arginine vasopressin receptor 2	ASP85ASN
Arginine vasopressin receptor 2	
Arginine vasopressin receptor 2	G107E
Arginine vasopressin receptor 2	
Arginine vasopressin receptor 2	GLY185CYS
Arginine vasopressin receptor 2	
Arginine vasopressin receptor 2	GLY201ASP
Arginine vasopressin receptor 2	
Arginine vasopressin receptor 2	L43P
Arginine vasopressin receptor 2	
Arginine vasopressin receptor 2	P322H
Arginine vasopressin receptor 2	
Arginine vasopressin receptor 2	P322S
Arginine vasopressin receptor 2	
Arginine vasopressin receptor 2	R137H
Arginine vasopressin receptor 2	
Arginine vasopressin receptor 2	TRP71TER
Arginine vasopressin receptor 2	
Arginine vasopressin receptor 2	TYR205CYS

Arginine vasopressin receptor 2	AF030626	304800	TYR280CYS
Arginine vasopressin receptor 2	AF030626	304800	W193X
Gamma-Aminobutyric Acid Receptor, Alpha-3; Gabra3	S62908	305660	16-repeat allele
Gamma-Aminobutyric Acid Receptor, Alpha-3; Gabra3	S62908	305660	Dinucleotide repeat
gasrin-releasing polypeptide receptor/G protein-coupled/GRPR	D87058	305670	two single nucleotide substitutions in exon 2
Glutamate Receptor, Ionotropic, Ampa 3; Glra3	X82068	305915	none found
Glycine Receptor, Alpha-2 Subunit; Glra2	X52008	305990	none found
Monoamine Oxidase A; MAOA	M69226	309850	23-bp VNTR
Monoamine Oxidase A; MAOA	M69226	309850	3rd base of codon 941 941 G>T
Monoamine Oxidase A; MAOA	M69226	309850	A1026T ProlineProline
Monoamine Oxidase A; MAOA	M69226	309850	A1559G LysineArginine
Monoamine Oxidase A; MAOA	M69226	309850	A385C ArginineArginine _e
Monoamine Oxidase A; MAOA	M69226	309850	C1410T Aspartic AcidAspartic

Monoamine Oxidase A; MAOA	M69226	309850	C886T Acid Glutamine296T termination codon
Monoamine Oxidase A; MAOA	M69226	309850	C886T GlutamineTermin ation codon
Monoamine Oxidase A; MAOA	M69226	309850	exon 14 -- RFLP (EcoRV enzyme)
Monoamine Oxidase A; MAOA	M69226	309850	length of (CA)n repeat
Monoamine Oxidase A; MAOA	M69226	309850	RFLP (EcoRV enzyme)
Monoamine Oxidase A; MAOA	M69226	309850	RFLP (Pst I)
Monoamine Oxidase A; MAOA	M69226	309850	T891G ArginineArginin e
Monoamine Oxidase A; MAOA	M69226	309850	T891G
Monoamine Oxidase B; MAOB	M69177	309860	(GT)n repeat
Monoamine Oxidase B; MAOB	M69177	309860	36 bases upstream from intron 13-exon 14 boundary
Monoamine Oxidase B; MAOB	M69177	309860	A at position 644 of intron 13
Monoamine Oxidase B; MAOB	M69177	309860	G at position 644 of intron 13
Monoamine Oxidase B; MAOB	M69177	309860	RFLP (MaeIII enzyme)
serotonin 5-HT receptors 5-HT1C, G	U49516	312861	2831T > G in the 3'

protein-coupled serotonin 5-HT receptors 5-HT1C, G	U49516	312861	CYS23SER
protein-coupled			
androgen receptor	M20132	313700	Hind III
androgen receptor	M20132	313700	(CAA)n
androgen receptor	M20132	313700	(CAG)n
androgen receptor	M20132	313700	(GGN)n
androgen receptor	M20132	313700	5-KB DEL, EX F, G
androgen receptor	M20132	313700	5-KB DEL, EX E
androgen receptor	M20132	313700	C>T within exon B silent
androgen receptor	M20132	313700	CAG340TAG Gln>Ter
androgen receptor	M20132	313700	Del T at 3286 frameshift
androgen receptor	M20132	313700	del1893 frameshift
androgen receptor	M20132	313700	G Codon 210 A
androgen receptor	M20132	313700	G Codon 211 A
androgen receptor	M20132	313700	G2314A ala>thr
androgen receptor	M20132	313700	G2677A glu629arg
androgen receptor	M20132	313700	HhaI
androgen receptor	M20132	313700	HpaII
androgen receptor	M20132	313700	Insert of 69
androgen receptor	M20132	313700	nucleotides
androgen receptor	M20132	313700	MaeIII
androgen receptor	M20132	313700	PARTIAL DEL
androgen receptor	M20132	313700	Stu I
androgen receptor	M20132	313700	598 or 599 ter
androgen receptor	M20132	313700	ALA721THR
androgen receptor	M20132	313700	ALA771THR
androgen receptor	M20132	313700	ARG607GLN
androgen receptor	M20132	313700	ARG608LYS
androgen receptor	M20132	313700	Arg615His

androgen receptor	M20132	313700	arg726leu
androgen receptor	M20132	313700	Arg752Gln
androgen receptor	M20132	313700	ARG772CYS
androgen receptor	M20132	313700	ARG773CYS
androgen receptor	M20132	313700	ARG773HIS
androgen receptor	M20132	313700	ARG839CYS
androgen receptor	M20132	313700	ARG839HIS
androgen receptor	M20132	313700	arg840his
androgen receptor	M20132	313700	ARG846HIS
androgen receptor	M20132	313700	ARG855HIS
androgen receptor	M20132	313700	CYS579PHE
androgen receptor	M20132	313700	G214R
androgen receptor	M20132	313700	GLN60TER
androgen receptor	M20132	313700	Gln798Glu
androgen receptor	M20132	313700	GLN902ARG
androgen receptor	M20132	313700	GLU2LYS
androgen receptor	M20132	313700	gly743val
androgen receptor	M20132	313700	HIS874TYR
androgen receptor	M20132	313700	ILE869MET
androgen receptor	M20132	313700	LEU172TER
androgen receptor	M20132	313700	LEU676PRO
androgen receptor	M20132	313700	LEU707ARG
androgen receptor	M20132	313700	LYS588TER
androgen receptor	M20132	313700	LYS882TER
androgen receptor	M20132	313700	MET780ILE
androgen receptor	M20132	313700	MET786VAL
androgen receptor	M20132	313700	PHE582TYR
androgen receptor	M20132	313700	PRO546SER
androgen receptor	M20132	313700	pro892ser
androgen receptor	M20132	313700	SER647ASN
androgen receptor	M20132	313700	THR877ALA

androgen receptor	M20132	313700	THR877SER
androgen receptor	M20132	313700	TRP717TER
androgen receptor	M20132	313700	TRP794TER
androgen receptor	M20132	313700	TYR761CYS
androgen receptor	M20132	313700	val 581 phe
androgen receptor	M20132	313700	VAL730MET
androgen receptor	M20132	313700	VAL865LEU
androgen receptor	M20132	313700	VAL865MET
androgen receptor	M20132	313700	VAL866MET
ACETYL SEROTONI		402500	none found
METHYLTRANSFER			
ASE, Y-			
CHROMOSOMAL			
voltage dependent	U07139	600003	none found
calcium channel beta 2			
subunit/CACNB2			
vascular angiotensin II	NM_0048	600015	none found
receptor type	35		
1B/AGTR1B			
Opioid Receptor, Mu-	NM_0009	600018	(CA)n
1; Oprm1	14		
Opioid Receptor, Mu-	NM_0009	600018	Asn40Asp
1; Oprm1	14		
P2Y2 purinoceptor/G	U07225	600041	none found
protein-coupled			
Solute Carrier Family	U03504	600111	none found
1, Member 3; Slc1a3			
type V voltage	NM_0003	600163	1-BP DEL frameshift
dependent sodium	35		
channel alpha			

SD-144441

subunit/SCN5A					
type V voltage					
dependent sodium					
channel alpha					2-BP INS
subunit/SCN5A					
type V voltage					
dependent sodium					
channel alpha					LYS1505/PRO1
subunit/SCN5A					506/GLN1507D
type V voltage					EL
dependent sodium					ARG1232TRP
channel alpha					
subunit/SCN5A					
type V voltage					
dependent sodium					ARG1623GLN
channel alpha					
subunit/SCN5A					
type V voltage					
dependent sodium					ARG1644HIS]
channel alpha					
subunit/SCN5A					
type V voltage					
dependent sodium					GLU1784LYS
channel alpha					
subunit/SCN5A					
type V voltage					
dependent sodium					THR1620MET
channel alpha					
subunit/SCN5A					
Histamine receptor H1					none found
Gamma-Aminobutyric					none found

SD-144148.1

Acid Receptor, Beta-2; Gabbr2	NM_0008 16	600233	none found	CYS121TRP
Gamma-Aminobutyric Acid Receptor, Gamma-3; Gabbr3	NM_0010 37	600235		
type I voltage dependent sodium channel beta subunit/SCN1B				
Arginine Vasopressin Receptor 1B/AVPR1B	AF030512	600264	none found	
Glutamate Receptor, Ionotropic, Kainate 4; Grik4	S67803	600282	none found	
Glutamate Receptor, Ionotropic, Kainate 5; Grik5	S40369	600283	none found	
Solute Carrier Family 1, Member 2; Slc1a2	U03505	600300	none found	
Vesicular acetylcholine transporter	NM_0030 55	600336	none found	
bradykinin receptor B1/BDKRB1 G	NM_0007 10	600337	9-base pair deletion	
protein-coupled bradykinin receptor B1/BDKRB1 G	NM_0007 10	600337	A1098-->G	
protein-coupled bradykinin receptor B1/BDKRB1 G	NM_0007 10	600337	C181-->T	

SD-111111.1

bradykinin receptor B1/BDKRB1 G	NM_0007 10	600337	G-699-->C
protein-coupled Glycine Receptor, Alpha-3 Subunit; Glra3	AF018157	600421	none found
Adenosine A3 Receptor; Adora3/G	L20463	600445	none found
protein-coupled Adenosine A2b Receptor; Adora2b/G	X68487	600446	none found
protein-coupled neurotrophic tyrosine kinase receptor type 2/NTRK2	NM_0061 80	600456	none found
inwardly rectifying potassium channel, subfamily J, member 4/KCNJ4	NM_0049 81	600504	none found
reelin/RELIN	NM_0050 45	600514	none found
Human immunophilin (FKBP52) mRNA, complete cds	M88279	600611	none found
opioid binding cell adhesion molecule OBCAM	*****	600632	none found
Solute carrier family 1, member 6 (GABA/GLU)/SLC1A 6	NM_0050 71	600637	none found
Human aryl	L19956	600641	none found

SD-HHHH

Accession	Gene	Protein	Accession	Gene	Protein	Accession	Gene	Protein
600665	MELATONIN RECEPTOR 1A	600665	600665	MELATONIN RECEPTOR 1A	600665	600665	MELATONIN RECEPTOR 1A	600665
600681	MELATONIN RECEPTOR 1A	600681	600681	MELATONIN RECEPTOR 1A	600681	600681	MELATONIN RECEPTOR 1A	600681
600702	MELATONIN RECEPTOR 1A	600702	600702	MELATONIN RECEPTOR 1A	600702	600702	MELATONIN RECEPTOR 1A	600702
600730	MELATONIN RECEPTOR 1A	600730	600730	MELATONIN RECEPTOR 1A	600730	600730	MELATONIN RECEPTOR 1A	600730
600731	MELATONIN RECEPTOR 1A	600731	600731	MELATONIN RECEPTOR 1A	600731	600731	MELATONIN RECEPTOR 1A	600731
600759	MELATONIN RECEPTOR 1A	600759	600759	MELATONIN RECEPTOR 1A	600759	600759	MELATONIN RECEPTOR 1A	600759
600804	MELATONIN RECEPTOR 1A	600804	600804	MELATONIN RECEPTOR 1A	600804	600804	MELATONIN RECEPTOR 1A	600804
600821	MELATONIN RECEPTOR 1A	600821	600821	MELATONIN RECEPTOR 1A	600821	600821	MELATONIN RECEPTOR 1A	600821
600825	MELATONIN RECEPTOR 1A	600825	600825	MELATONIN RECEPTOR 1A	600825	600825	MELATONIN RECEPTOR 1A	600825
600843	MELATONIN RECEPTOR 1A	600843	600843	MELATONIN RECEPTOR 1A	600843	600843	MELATONIN RECEPTOR 1A	600843

P2x. Ligand-Gated Ion Channel, 3; P2rx3				
Purinergic Receptor	NM_0025	600845	none found	
P2x. Ligand-Gated Ion Channel, 1; P2rx1	58			
Purinergic Receptor	AF000234	600846	none found	
P2x. Ligand-Gated Ion Channel, 4; P2rx4				
G protein coupled	*****	600932	none found	
potassium channel				
inward rectifier/GIRK3				
isolate hydrolase	600934	600934	none found	
1/FOH1				
growth hormone				
receptor, GHR	NM_0001	600946		
serotonin N-	63			
Acetyltransferase;	U40347	600950	none found	
SNAT				
leptin receptor/LEPR	NM_0023	601007	(CTTTA)n	
	03			
leptin receptor/LEPR	NM_0023	601007	3'-UTR	
	03		insertion/deletion	
leptin receptor/LEPR	NM_0023	601007	CA microsatellite	
	03		repeat in intron 3,	
leptin receptor/LEPR	NM_0023	601007	IVS16, G-A, +1	
	03			
leptin receptor/LEPR	NM_0023	601007	Ala976Asp	
	03			
leptin receptor/LEPR	NM_0023	601007	Gln223Arg	
	03			
leptin receptor/LEPR	NM_0023	601007	GLN23ARG	
	03			

leptin receptor/LEPR	NM_0023 03	601007	K109R
leptin receptor/LEPR	NM_0023 03	601007	K656N
leptin receptor/LEPR	NM_0023 03	601007	Lys109Arg
leptin receptor/LEPR	NM_0023 03	601007	Lys656Asn
leptin receptor/LEPR	NM_0023 03	601007	Pro1019Pro
leptin receptor/LEPR	NM_0023 03	601007	Ser343Ser
leptin receptor/LEPR	NM_0023 03	601007	Ser492Thr
Solute carrier family 6, Member 9; SLC6A9 (glycine)	S70612	601019	none found
serotonin 5-HT receptors 5-HT6, G protein-coupled	L41147	601109	C267T
Glutamate Receptor, Metabotropic 3/G protein-coupled/Grm3	X77748	601115	none found
Glutamate Receptor, Metabotropic 8/G protein-coupled/Grm8	U95025	601116	none found
Thimet oligopeptidase	Z50115	601117	none found
serotonin 5-HT receptors 5-HT2B, G protein-coupled	X77307	601122	none found

SD- 411411

P2Y1 purinoceptor/G protein-coupled type II voltage dependent sodium channel alpha 2 subunit/SCN2A2	U42029	601167	601219	none found
H.sapiens mRNA for aryl sulfotransferase (ST1A2)	X78282	601292		none found
serotonin 5-HT receptor 5-HT5a, G protein-coupled type II voltage dependent sodium channel beta subunit/SCN2B	X81411	601305		none found
H.sapiens mRNA for prepronociceptin	NM_0045 88	601327		none found
P2Y7 purinoceptor/leukotrien e B4 receptor/G protein-coupled	X97370	601459		none found
G protein coupled potassium channel, subfamily J, member 3/KCNJ/CIRK1	NM_0007 52	601531		none found
estrogen receptor 2 (ESR2)	NM_0022 39	601534		(CA)n
voltage dependent potassium channel, subfamily K, member	X99101	601663		none found
	NM_0022 45	601745		none found

SD 041111

1/KCNM1	NM_0003	601769	A(T/C)G	putative translation start site
vitamin D receptor VDR	76			
vitamin D receptor VDR	NM_0003	601769	Apal	
vitamin D receptor VDR	76			
vitamin D receptor VDR	NM_0003	601769	BsmI	
vitamin D receptor VDR	76			
vitamin D receptor VDR	NM_0003	601769	FokI	
vitamin D receptor VDR	76			
vitamin D receptor VDR	NM_0003	601769	PvuII	
vitamin D receptor VDR	76			
vitamin D receptor VDR	NM_0003	601769	TaqI	
vitamin D receptor VDR	76			
vitamin D receptor VDR	NM_0003	601769	XbaI	
vitamin D receptor VDR	76			
vitamin D receptor VDR	NM_0003	601769		ARG-GLY
vitamin D receptor VDR	76			
vitamin D receptor VDR	NM_0003	601769		ARG391CYS
vitamin D receptor VDR	76			
vitamin D receptor VDR	NM_0003	601769		HIS305GLN
vitamin D receptor VDR	76			
vitamin D receptor VDR	NM_0003	601769		ILE314SER
vitamin D receptor VDR	76			
vitamin D receptor VDR	NM_0003	601769		ARG271LEU
vitamin D receptor VDR	76			
vitamin D receptor VDR	NM_0003	601769		ARG30TER
vitamin D receptor VDR	76			
vitamin D receptor VDR	NM_0003	601769		ARG47GLN
vitamin D receptor VDR	76			
vitamin D receptor VDR	NM_0003	601769		ARG77GLN

receptor VDR	76	NM_0003	601769	codon 352
vitamin D				
receptor VDR	76	NM_0003	601769	GLN149TER
vitamin D				
receptor VDR	76	NM_0003	601769	GLY30ASP
vitamin D				
receptor VDR	76	NM_0003	601769	GLY46ASP
vitamin D				
receptor VDR	76	NM_0003	601769	TYR292TER
vitamin D				
receptor VDR	76	NM_0003	601769	
Neuropeptide Y				none found
receptor Y6	D86519	601770		
voltage independent				none found
neuronal sodium	NM_0010	601784		
channel 1/ACCN1	94			
voltage dependent	*****	601949		none found
calcium channel beta 4				
subunit 4/ACNB4				
voltage dependent				none found
calcium channel beta 3	NM_0007	601958		
subunit 3/ACNB3	25			
vasoactive intestinal	L40764	601970		none found
peptide receptor				
2A/4PR				
RAR related orphan	*****	601972		none found
receptor B/RORB				
Opioid Receptor,	U75283	601978		Gln2Pro
Sigma 1				
Opioid Receptor,	U75283	601978		GC-241-240TT in
Sigma 1				the 5'

Neuropeptide Y receptor Y5	U94320	602001	none found
Calcitonin releasing hormone receptor 2	NM_001883	602034	none found
neuropilin 1/VEGF 165 receptor/NRP1	NM_003873	602069	none found
neuropilin 2/VEGF 165 receptor NP2	NM_003872	602070	none found
Solute carrier family 29 (nucleosides), member 2/SLC29A2/ENT2	X86681	602110	none found
serotonin 5-HT receptors 5-HT4, G protein-coupled	Y08756	602164	none found
Solute carrier family 29 (nucleosides), member 1/SLC29A1/ENT1	NM_004955	602193	none found
inwardly rectifying potassium channel, subfamily J, member 10/KCNQ10	*****	602208	none found
voltage dependent potassium channel, KCa1-like subfamily, member 3/KCNQ3	AF033347	602232	GLY263VAL
voltage dependent potassium channel, KCa1-like subfamily, member 2/KCNQ2	NM_000218	602235	1-BP DEL, 1846T frameshift
voltage dependent potassium channel,	NM_000218	602235	5-BP INS frameshift

SD 140111

KC F-like subfamily, member 2/KCNQ2 voltage dependent potassium channel, KC F-like subfamily, member 2/KCNQ2	NM_0002 18	602235	ALA306THR
voltage dependent potassium channel, KC F-like subfamily, member 2/KCNQ2	NM_0002 18	602235	TYR284CYS
Amine oxidase (copper-containing) 2/ACOX	D88213	602268	none found
Glutamate Receptor, Ionotropic, Delta 2; Gri2	AF009014	602368	none found
P2Y6 pyrimidinergic receptor G protein- coupled	NM_0041 54	602451	none found
opioid receptor-like 1/GPR1	X77130	602548	none found
Purnergic Receptor P2X ₂ Ligand-Gated Ion Channel, 7; P2rx7	Y09561	602566	none found
Human FK506-binding protein FKBP51	U71321	602623	none found
mRNA, complete cds P2Y11 purinoceptor/G protein-coupled	*****	602697	none found
Glutamate Receptor, Ionotropic, N-Methyl-	U77783	602717	none found

D-Asp 2d; Grin2d	U95367	602729	none found
Gamma-Aminobutyric Acid Receptor, Pi; Gabap	AF064876	602780	none found
cyclic nucleotide gated hyperpolarization activated potassium channel 1/HCN1	AF064877	602781	none found
cyclic nucleotide gated hyperpolarization activated potassium channel 2/HCN2	NM_002561	602836	none found
Purinergic Receptor P2X; Ligand-Gated Ion Channel 5; P2rx5	NM_001095	602866	none found
voltage independent neuronal sodium channel 2/ACCN2	*****	602905	none found
voltage dependent potassium channel, subfamily S, member 1/Kv1NS1	*****	602906	none found
voltage dependent potassium channel, subfamily S, member 2/Kv1NS2	*****	602911	none found
neuronal voltage dependent calcium channel gamma subunit CACNG2	NM_0050	602943	none found
RA related orphan			

rec pto C/RORC	60				
vit-min B12	NM_001081	602997		IVS6, C-G	
rec pto cubilin/CUBN					PRO1297LEU
vit-min B12	NM_001081	602997			
rec pto cubilin/CUBN					
homo sapiens breast cancer specific protein 1 (SG1) mRNA, complete cds	AF010126	602998		none found	
Solute carrier family 6 (bacterial ABCA), member 12	U27699	603080		none found	
potassium channel, subfamily J, member 13, CNG13	AJ007557	603208		none found	
voltage dependent potassium channel, subfamily K, member 2/1, CNG12	*****	603219		none found	
voltage dependent potassium channel, subfamily K, member 3/1, CNG3	NM_002246	603220		none found	
voltage dependent potassium channel, subfamily H, member 1/1, CNG12	NM_002238	603305		none found	
thyroid stimulating hormone receptor	NM_000369	603372		18-BP DEL, 4-BP frameshift INS	
thyroid stimulating hormone receptor	NM_000369	603372		1953-1957 deletion Asp at 619 deleted	

thyroid stimulating hormone receptor	NM_000369	603372	2 bases deleted of codon 655 C253A
thyroid stimulating hormone receptor	NM_000369	603372	
thyroid stimulating hormone receptor	NM_000369	603372	duplication of nucleotides -346 to -330
thyroid stimulating hormone receptor	NM_000369	603372	G to C +3 intron 6
thyroid stimulating hormone receptor	NM_000369	603372	G-A -4 intron
thyroid stimulating hormone receptor	NM_000369	603372	TaqI
thyroid stimulating hormone receptor	NM_000369	603372	CYS41SER
thyroid stimulating hormone receptor	NM_000369	603372	LEU629PHE
thyroid stimulating hormone receptor	NM_000369	603372	SER505ASN
thyroid stimulating hormone receptor	NM_000369	603372	ALA553THR
thyroid stimulating hormone receptor	NM_000369	603372	ALA623ILE
thyroid stimulating hormone receptor	NM_000369	603372	alanine 623 to valine
thyroid stimulating hormone receptor	NM_000369	603372	ARG109GLN
thyroid stimulating hormone receptor	NM_000369	603372	Asn715Asp
thyroid stimulating hormone receptor	NM_000369	603372	Asp219Glu

thyroid stimulating hormone receptor	NM_0003 69	603372	ASP36HIS
thyroid stimulating hormone receptor	NM_0003 69	603372	ASP410ASN
thyroid stimulating hormone receptor	NM_0003 69	603372	ASP619GLY
thyroid stimulating hormone receptor	NM_0003 69	603372	ASP633HIS
thyroid stimulating hormone receptor	NM_0003 69	603372	asp727glu
thyroid stimulating hormone receptor	NM_0003 69	603372	Asp727Glu
thyroid stimulating hormone receptor	NM_0003 69	603372	CAG
thyroid stimulating hormone receptor	NM_0003 69	603372	[Glu]227CAT
thyroid stimulating hormone receptor	NM_0003 69	603372	[His]
thyroid stimulating hormone receptor	NM_0003 69	603372	CYS390TRP
thyroid stimulating hormone receptor	NM_0003 69	603372	CYS672TYR
thyroid stimulating hormone receptor	NM_0003 69	603372	GCG
thyroid stimulating hormone receptor	NM_0003 69	603372	[Ala]460GCA
thyroid stimulating hormone receptor	NM_0003 69	603372	[Ala]
thyroid stimulating hormone receptor	NM_0003 69	603372	GGT[Arg]201C
thyroid stimulating hormone receptor	NM_0003 69	603372	AT [His]
thyroid stimulating hormone receptor	NM_0003 69	603372	GLN324TER
thyroid stimulating hormone receptor	NM_0003 69	603372	ILE167ASN
thyroid stimulating hormone receptor	NM_0003 69	603372	leu677val
thyroid stimulating hormone receptor	NM_0003 69	603372	LYS183ARG

hormone receptor	69			Lys723 Met
thyroid stimulating	NM_0003	603372		
hormone receptor	69			
thyroid stimulating	NM_0003	603372		MET453THR
hormone receptor	69			
thyroid stimulating	NM_0003	603372		P52T
hormone receptor	69			
thyroid stimulating	NM_0003	603372		Phe197Ile
hormone receptor	69			
thyroid stimulating	NM_0003	603372		PHE525LEU
hormone receptor	69			
thyroid stimulating	NM_0003	603372		PHE631LEU
hormone receptor	69			
thyroid stimulating	NM_0003	603372		PRO162ALA
hormone receptor	69			
thyroid stimulating	NM_0003	603372		SER281ASN
hormone receptor	69			
thyroid stimulating	NM_0003	603372		SER281ILE
hormone receptor	69			
thyroid stimulating	NM_0003	603372		TRP546TER
hormone receptor	69			
thyroid stimulating	NM_0003	603372		VAL509ALA
hormone receptor	69			
type IX voltage	NM_0029	603415	none found	
dependent sodium	77			
channel alpha				
subunit SCN9A				
homolog of Drosophila	AF071062	603448	none found	
disinhibited DAB1				
Gamma-Aminobutyric	Y11044	603540	none found	
Acid Receptor 1;				

Gal-1						
glutagon-like peptide 2 receptor/GLP2R	*****	603659				none found
Amine oxidase (copper-containing) 3/A OC3	AF054985	603735				none found
voltage dependent potassium channel, subfamily F, member 1/KCNF1	NM_0022 36	603787				none found
voltage dependent potassium channel, subfamily S, member 3/A CNK3	AF043472	603888				none found
inwardly rectifying potassium channel, subfamily J, member 14/KCNJ14	*****	603953				none found
sodium channel alpha- subunit/SCN4A	U24693	603967				(GA)n
sodium channel alpha- subunit/SCN4A	U24693	603967				(GT)n
sodium channel alpha- subunit/SCN4A	U24693	603967				GLY1306ALA
sodium channel alpha- subunit/SCN4A	U24693	603967				ALA1156THR
sodium channel alpha- subunit/SCN4A	U24693	603967				ARG1448CYS
sodium channel alpha- subunit/SCN4A	U24693	603967				ARG1448HIS
sodium channel alpha- subunit/SCN4A	U24693	603967				GLY1306VAL

subunit/SCN4A	U24693	603967	ILE1160VAL
sodium channel alpha-subunit/SCN4A	U24693	603967	LEU1433ARG
sodium channel alpha-subunit/SCN4A	U24693	603967	MET1592VAL
sodium channel alpha-subunit/SCN4A	U24693	603967	SER804PHE
sodium channel alpha-subunit/SCN4A	U24693	603967	THR1313MET
sodium channel alpha-subunit/SCN4A	U24693	603967	THR704MET
sodium channel alpha-subunit/SCN4A	U24693	603967	VAL1293ILE
sodium channel alpha-subunit/SCN4A	U24693	603967	VAL1589MET
sodium channel alpha-subunit/SCN4A	U24693	603967	VAL445MET
Glutamate Receptor, Metabotropic 6/G	U82083	604096	none found
protein-coupled/Grm6			
Glutamate Receptor, Metabotropic 2/G	L35318	604099	none found
protein-coupled/ Grm2			
Glutamate Receptor, Metabotropic 4/G	X80818	604100	none found
protein-coupled/Grm4			
Glutamate Receptor, Metabotropic 7/G	X94552	604101	none found
protein-coupled/Grm7			

Glutamate Receptor, Metabotropic 5/G	D28538	604102	none found
protein-coupled/Grm5			
dihydrofolate reductase	J00140	126060	2 RFLP's
dihydrofolate reductase	J00140	126060	intronic
			polymorphism
FKBP, tacrolimus binding protein,	M34539	186945	none found
FK506-binding protein 1 (12kD)			
Cyclooxygenase 1 COX1	M59979	176805	none found
Cyclooxygenase 2 COX2	M90100	600262	none found
beta-synuclein [human, brain, mRNA, 730 nt]	S69965	602569	none found
histamine N- methyltransferase			A939G
histamine N- methyltransferase			Thr105Ile

Table 20. Identified
Variances in Genes or
Related Pathways
involved in the
Pharmacokinetics and
Pharmacodynamics of
Candidate Therapeutic
Interventions

3'(2'), 5'-bisphosphate 604053 NM_00608 none found

SD-144141.1

nucleotidase 1/BPNT				
Acetylcholinesterase/A	100740	⁵ M55040	1431 C/T 446 silent	
CHE				
Acetylcholinesterase/A	100740	M55040	408 G/C arg561pro	
CHE				
Acetylcholinesterase/A	100740	M55040	HIS322ASN	
CHE				
acyl-Coenzyme A			none found	
dehydrogenase, C-4 to				
C-12 straight				
chain/ACADM				
(mitochondrial)				
ALCOHOL	103700		none found	
DEHYDROGENASE				
1				
aldehyde	100650	K03001	GLU487LYS	
dehydrogenase				
2/ALDH2 (liver				
mitochondria)				
aldehyde	100650	K03001	A-361G	
dehydrogenase				
2/ALDH2 (liver				
mitochondria)				
aldehyde	100650	K03001	-357 G/A	
dehydrogenase				
2/ALDH2 (liver				
mitochondria)				
ALDEHYDE	100670		C183T silent	
DEHYDROGENASE				
5				
ALDEHYDE	100670		C257T Val<-->Ala	

DEHYDROGENASE	5				
ALDEHYDE	100670				T320G Arg<-->Leu
DEHYDROGENASE	5				
ALDO-KETO	600449				none found
REDUCTASE					
FAMILY 1, MEMBER					
1; AKR1C1					
ALDO-KETO	103830				none found
REDUCTASE					
FAMILY 1, MEMBER					
A1; AKR1A1					
ALDO-KETO	603966				none found
REDUCTASE					
FAMILY 1, MEMBER					
C3					
Aldo-keto reductase	600451	*****			none found
family 1, member					
C4/chlorodecone					
reductase/AKR1C4					
Aldo-keto reductase	603418	NM_00368			none found
family 7, member		9			
A2/aflatoxin aldehyde					
reductase/AKR7A2					
anthracylcline	603234	NM_00117			none found
resistance-related		1			
protein/ARA					
antigen peptide					
transporter 1/MHC	170260	NM_00059			ILE333VAL
1/TAP1		3			

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antigen peptide transporter 1/MHC 1/TAP1	170260	NM_000593	ASP637GLY
antigen peptide transporter 1/MHC 1/TAP1	170260	NM_000593	ARG659GLN
antigen peptide transporter 1/MHC 1/TAP1	170260	NM_000593	val- leucine
antigen peptide transporter 1/MHC 1/TAP1	170260	NM_000593	silent glycine
antigen peptide transporter 1/MHC 1/TAP1	170260	NM_000593	silent glutamic acid
antigen peptide transporter 1/MHC 1/TAP1	170260	NM_000593	silent alanine
antigen peptide transporter 1/MHC 1/TAP1	170260	NM_000593	GTC-->ATC Val518Ile
antigen peptide transporter 1/MHC 1/TAP1	170260	NM_000593	G-->T promoter
antigen peptide transporter 1/MHC 1/TAP1	170260	NM_000593	10-bp insert intron 9
antigen peptide transporter 1/MHC 1/TAP1	170260	NM_000593	G-->T 80-bp 3' termination codon
antigen peptide transporter 1/MHC 1/TAP1	170260	NM_000593	dinucleotide repeat

transporter 1/MHC 1/TAP1	3	intron 3	
antigen peptide transporter 2/MHC 2/TAP2	170261 NM_00054 4		ILE379VAL
antigen peptide transporter 2/MHC 2/TAP2	170261 NM_00054 4		ALA665THR
antigen peptide transporter 2/MHC 2/TAP2	170261 NM_00054 4		GLN687TER
antigen peptide transporter 2/MHC 2/TAP2	170261 NM_00054 4		Thr374Ala
antigen peptide transporter 2/MHC 2/TAP2	170261 NM_00054 4	ACG to ACA	458Thr
antigen peptide transporter 2/MHC 2/TAP2	170261 NM_00054 4	GGG to GGA	466Gly
antigen peptide transporter 2/MHC 2/TAP2	170261 NM_00054 4	GTT to ATT	467Val-Ile
antigen peptide transporter 2/MHC 2/TAP2	170261 NM_00054 4	ATG-->GTG	Met577Val
antigen peptide transporter 2/MHC 2/TAP2	170261 NM_00054 4		565 (Ala-Thr)
antigen peptide transporter 2/MHC 2/TAP2	170261 NM_00054 4		silent codon 386

2/TAP2

Aromatic L-Amino Acid	107930	M76180	SspI	
Decarboxylase/AADC/ dopa decarboxylase				
Aryl hydrocarbon receptor nuclear translocator- like/ARNTL	602550	NM_001178	none found	
Aryl hydrocarbon receptor nuclear translocator/ARNT	126110	NM_001668	MspI	
Aryl hydrocarbon receptor/AHR	600253	NM_001621	none found	
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_000487	A-to-G transition changed the first polyadenylation	ARG350SER
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_000487		
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_000487	IVS2DS, G-A, +1	PRO426LEU
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_000487		GLY99ASP
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_000487		SER96PH
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_000487	11-BP DEL, EX8	
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_000487		ILE-TO-SER, EX3

Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	IVS7DS, G-A, +1	
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7		ARG84GLN
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7		GLY309SER
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	-BP DEL FS105TER	
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7		GLY86ASP
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7		SER96LEU
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7		GLY122SER
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7		PRO136LEU
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	1-BP DEL, 297C	
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7		GLY154ASP
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7		PRO155ARG
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7		PRO167ARG
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7		ASP169ASN
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7		ALA212VAL
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7		ALA224VAL
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7		PRO231THR

sulfatase/ARSA	250100	NM_00048 ₇	ARG244CYS
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	GLY245ARG
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	THR274MET
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	IVS4DS, G-A, +1
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	ARG288CYS
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	SER295TYR
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	GLY325CYS
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	ASP335VAL
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	ARG370TRP
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	ARG370GLN
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	PRO377LEU
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	GLU382LYS
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	ARG390TRP
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	PHE398DEL
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	THR409ILE

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Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	GLN486TER
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	THR799GLY
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	P148L
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	P191T
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	R496H
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	N350S
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	9-bp deletion (2320del9) NlaIII
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	NlaIII2
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	BsrI
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	BamHI
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	L428P
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	I179S
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	R84Q
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	S96F
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	S95N

sulfatase/ARSA	250100	NM_00048 ₇	G119R
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	D152Y
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	R244H
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	S250Y
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	A314T
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	R384C
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	R496H
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	K367N
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	leu76pro
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	A2725G
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	A1788G
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	D255H
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	287 C-->T
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	1524+95 A-->G
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 ₇	Q190-->H

Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	A1788G
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	A2723G
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	C2330T
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	11-bp deletion in exon 8
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	A1049G
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	TaqI
Arylsulfatase A/steroid sulfatase/ARSA	250100	NM_00048 7	BamHI
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_00004 6	GLY137VAL
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_00004 6	CYS117ARG
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_00004 6	LEU236PRO
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_00004 6	CYS405TYR
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_00004 6	1-BP DEL frameshift
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_00004 6	743C DEL frameshift
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_00004 6	11-BP DEL
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_00004 6	G302R
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_00004 6	Q456X

sulfatase/ARSB	253200	NM_000046	A1191G	
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_000046		
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_000046		*534Q
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_000046		R160*
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_000046		R160Q
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_000046		7-bp del frameshift
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_000046		deletion (delta G237-C243)
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_000046		R152W
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_000046		arg144gly
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_000046		arg192cys
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_000046		pro321leu
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_000046		insertion between T1284 and G1285
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_000046		deletion C1577
Arylsulfatase B/steroid sulfatase/ARSB	253200	NM_000046		T1600C
Arylsulfatase C, isozyme s/steroid sulfatase/ARCS1	308100	NM_000351		TRP372ARG
Arylsulfatase C,	308100	NM_00035		CYS446TYR

isozyme s/steroid sulfatase/ARCS1	1				
Arylsulfatase C, isozyme s/steroid sulfatase/ARCS1	308100	NM_00035 1			SER341LEU
Arylsulfatase C, isozyme s/steroid sulfatase/ARCS1	308100	NM_00035 1			TRP372PRO
Arylsulfatase C, isozyme s/steroid sulfatase/ARCS1	308100	NM_00035 1			HIS444ARG
Arylsulfatase C, isozyme s/steroid sulfatase/ARCS1	308100	NM_00035 1	19-bp insertion 1477 frameshift intron/exon 18		
Arylsulfatase D/steroid sulfatase/ARSD	300002	*****	none found		
Arylsulfatase E/steroid sulfatase/ARSE	300180	NM_00004 7			ARG12SER
Arylsulfatase E/steroid sulfatase/ARSE	300180	NM_00004 7			GLY117ARG
Arylsulfatase E/steroid sulfatase/ARSE	300180	NM_00004 7			ARG111PRO
Arylsulfatase E/steroid sulfatase/ARSE	300180	NM_00004 7			GLY137VAL
Arylsulfatase E/steroid sulfatase/ARSE	300180	NM_00004 7			GLY245ARG
Arylsulfatase E/steroid sulfatase/ARSE	300180	NM_00004 7			CYS492TYR
Arylsulfatase F/steroid sulfatase/ARSF	300003	NM_00404 2	none found		
bile salt export	603201	NM_00374			ARG575TER

pump/BSEP	603201	NM_00374_2	GLU297GLY
bile salt export pump/BSEP	603201	NM_00374_2	1-BP DEL, 908G frameshift
bile salt export pump/BSEP	603201	NM_00374_2	1-BP INS, 3767C frameshift
bile salt export pump/BSEP	177500	*****	none found
butyrylcholinesterase	177400	NM_00005_5	GCA to ACA ALA539THR
2/serum cholinesterase	177400	NM_00005_5	GGT to GTT Gly 390 to Val
2/BCHE2	177400	NM_00005_5	E451X
butyrylcholinesterase	177400	NM_00005_5	F446V
1/serum cholinesterase	177400	NM_00005_5	THR250PRO
1/BCHE1	177400	NM_00005_5	A-to-G Y128C
butyrylcholinesterase	177400	NM_00005_5	LEU330ILE
1/serum cholinesterase	177400	NM_00005_5	
1/BCHE1	177400	NM_00005_5	

butyrylcholinesterase 1/serum cholinesterase 1/BCHE1	177400	NM_00005 5	G365R
butyrylcholinesterase 1/serum cholinesterase 1/BCHE1	177400	NM_00005 5	Q119X
butyrylcholinesterase 1/serum cholinesterase 1/BCHE1	177400	NM_00005 5	R515C
butyrylcholinesterase 1/serum cholinesterase 1/BCHE1	177400	NM_00005 5	GLU497VAL
butyrylcholinesterase 1/serum cholinesterase 1/BCHE1	177400	NM_00005 5	THR243MET
butyrylcholinesterase 1/serum cholinesterase 1/BCHE1	177400	NM_00005 5	GGT-to-GGAG Gly 117 Frameshift
butyrylcholinesterase 1/serum cholinesterase 1/BCHE1	177400	NM_00005 5	Gly115 by Asp
butyrylcholinesterase 1/serum cholinesterase 1/BCHE1	177400	NM_00005 5	342-bp Alu in exon two Alu insertion
butyrylcholinesterase 1/serum cholinesterase 1/BCHE1	177400	NM_00005 5	209 A/G Asp-70 to Gly
butyrylcholinesterase 1/serum cholinesterase 1/BCHE1	177400	NM_00005 5	
CARBOXYLESTERA	114835		none found

SE 1; CESI

Catechol-O-	116790	M58525	BglI	
Methyltransferase				
Catechol-O-	116790	M58525	186C > T at exon 3	
Methyltransferase				
Catechol-O-	116790	M58525	408C > G at exon 4	
Methyltransferase				
Catechol-O-	116790	M58525	472G > A at exon 4	
Methyltransferase				
Catechol-O-	116790	M58525	597G > A at exon 5	
Methyltransferase				
Catechol-O-	116790	M58525	821-827insC at the 3'	
Methyltransferase				
Catechol-O-	116790	M58525		Val158-->Met
Methyltransferase				
Catechol-O-	116790	M58525	NlaIII	
Methyltransferase				
Catechol-O-	116790	M58525	MspI	
Methyltransferase				
Catechol-O-	116790	M58525		val-108-met
Methyltransferase				
Catechol-O-	116790	M58525	G/A1947	
Methyltransferase				
Catechol-O-	116790	M58525	C256G silent	
Methyltransferase				
class I aldehyde	100640	M26761	none found	
dehydrogenase				
cytochrome P450	107910	X13589	(TTTA)n in intron 5	
aromatase (CYP19)				
cytochrome P450	107910	X13589	1-BP DEL, 408C frameshift	
aromatase (CYP19)				

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cytochrome P450 aromatase (CYP19)	107910	X13589	G-->A at Val80 silent
cytochrome P450 aromatase (CYP19)	107910	X13589	G-1094 -A ARG365GLN
cytochrome P450 aromatase (CYP19)	107910	X13589	G-to-A Val370-to-Met
cytochrome P450 aromatase (CYP19)	107910	X13589	GT to AT exon and intron 3
cytochrome P450 aromatase (CYP19)	107910	X13589	splice donor 29 extra amino (GT>GC) of intron 6 acids
cytochrome P450 aromatase (CYP19)	107910	X13589	Arg264cys
cytochrome P450 aromatase (CYP19)	107910	X13589	ARG375CYS
cytochrome P450 aromatase (CYP19)	107910	X13589	ARG435CYS
cytochrome P450 aromatase (CYP19)	107910	X13589	CYS437TYR
cytochrome P450, subfamily I, polypeptide 1 (aryl hydrocarbon oxidase)/CYP1A1	108330	NM_00049 9	cATT-GTT Ile462Val
cytochrome P450, subfamily I, polypeptide 1 (aryl hydrocarbon oxidase)/CYP1A1	108330	NM_00049 9	MspI
cytochrome P450, subfamily I, polypeptide 1 (aryl hydrocarbon oxidase)/CYP1A1	108330	NM_00049 9	T6235C

hydrocarbon oxidase)/CYP1A1 cytochrome P450, subfamily I, polypeptide 1 (aryl hydrocarbon oxidase)/CYP1A1 cytochrome P450, subfamily I, polypeptide 1 (aryl hydrocarbon oxidase)/CYP1A1 cytochrome P450, subfamily I,	108330	NM_00049 9	A4889G
hydrocarbon oxidase)/CYP1A1 cytochrome P450, subfamily I, polypeptide 1 (aryl hydrocarbon oxidase)/CYP1A1 cytochrome P450, subfamily I, polypeptide 1 (aryl hydrocarbon oxidase)/CYP1A1 cytochrome P450, subfamily I,	108330	NM_00049 9	T5639C
hydrocarbon oxidase)/CYP1A1 cytochrome P450, subfamily I, polypeptide 1 (aryl hydrocarbon oxidase)/CYP1A1 cytochrome P450, subfamily I,	108330	NM_00049 9	C4887A
hydrocarbon oxidase)/CYP1A1 cytochrome P450, subfamily I, polypeptide 1 (aryl hydrocarbon oxidase)/CYP1A1 cytochrome P450, subfamily I,	108330	NM_00049 9	C(-459)T
hydrocarbon oxidase)/CYP1A1 cytochrome P450, subfamily I, polypeptide 1 (aryl hydrocarbon oxidase)/CYP1A1 cytochrome P450, subfamily I,	108330	NM_00049 9	G(-469)A
hydrocarbon oxidase)/CYP1A1 cytochrome P450, subfamily I, polypeptide 1 (aryl hydrocarbon oxidase)/CYP1A1 cytochrome P450, subfamily I,	108330	NM_00049 9	C(4151)T)

oxidase)/CYP1A1 cytochrome P450, subfamily I, polypeptide 1 (aryl hydrocarbon oxidase)/CYP1A1	108330	NM_00049 9	HinCII	
cytochrome P450, subfamily I, polypeptide 2 (phenacetin metabolism)/CYP1A2	124060	AH002667	C->A polymorphism in intron 1	
cytochrome P450, subfamily I, polypeptide 2 (phenacetin metabolism)/CYP1A2	124060	AH002667	G->A -2964	
cytochrome P450, subfamily I, polypeptide 2 (phenacetin metabolism)/CYP1A2	124060	AH002667	F21L	
cytochrome P450, subfamily IB, polypeptide 1 (dioxin inducible)/CYP1B1	601771	NM_00010 4	deletion 1410 to frameshift 1422	
cytochrome P450, subfamily IB, polypeptide 1 (dioxin inducible)/CYP1B1	601771	NM_00010 4	insertion between frameshift 1209 and 1214	
cytochrome P450, subfamily IB,	601771	NM_00010 4	GLY61GLU	

polypeptide 1 (dioxin inducible)/CYP1B1 cytochrome P450, subfamily IB,	601771	NM_000104	1546DUP10 frameshift	
polypeptide 1 (dioxin inducible)/CYP1B1 cytochrome P450, subfamily IB,	601771	NM_000104	GLY365TRP	
polypeptide 1 (dioxin inducible)/CYP1B1 cytochrome P450, subfamily IB,	601771	NM_000104	ARG469TRP	
polypeptide 1 (dioxin inducible)/CYP1B1 cytochrome P450, subfamily IB,	601771	NM_000104	ASP374ASN	
polypeptide 1 (dioxin inducible)/CYP1B1 cytochrome P450, subfamily IB,	601771	NM_000104	LYS387GLU	
polypeptide 1 (dioxin inducible)/CYP1B1 cytochrome P450, subfamily IB,	601771	NM_000104	432 (Val-->Leu)	
polypeptide 1 (dioxin inducible)/CYP1B1 cytochrome P450, subfamily IB,	601771	NM_000104	453 (Asn-->Ser)	
polypeptide 1 (dioxin inducible)/CYP1B1 cytochrome P450,	123960	X13897	XmnI	

subfamily II, polypeptide 1 (phenobarbital inducible)/CYP2A cytochrome P450, subfamily IIA, polypeptide 6 (coumarin-7- hydroxylase)/CYP2A6	122720	NM_00076 2	LEU160HIS
cytochrome P450, subfamily IIA, polypeptide 6 (coumarin-7- hydroxylase)/CYP2A6	122720	NM_00076 2	CYP2A6 null
cytochrome P450, subfamily IIA, polypeptide 6 (coumarin-7- hydroxylase)/CYP2A6	122720	NM_00076 2	DdeI
cytochrome P450, subfamily IIB (phenobarbital inducible)/CYP2B cytochrome P450, subfamily IIC, polypeptide 18/CYP2C18	123930	M29874	none found
cytochrome P450, subfamily IIC, polypeptide 18/CYP2C18	601131	*****	T204 --> A
cytochrome P450, subfamily IIC, polypeptide 18/CYP2C18	601131	*****	A-460 --> T

cytochrome P450, subfamily IIC, polypeptide 18/CYP2C18	601131	*****	Ddel	
cytochrome P450, subfamily IIC, polypeptide 18/CYP2C18	601131	*****		Thr385Met
cytochrome P450, subfamily IIC, polypeptide 19 (mephenytoin 4- hydroxylase)/CYP2C1	124020	NM_00076 9	40-BP DEL	
cytochrome P450, subfamily IIC, polypeptide 19 (mephenytoin 4- hydroxylase)/CYP2C1	124020	NM_00076 9		ARG433TRP
cytochrome P450, subfamily IIC, polypeptide 8/CYP2C8	601129	*****		
cytochrome P450, subfamily IIC, polypeptide 9 (hydroxylation of tolbutamide)/CYP2C9	601130	*****		ILE359LEU
cytochrome P450, subfamily IIC, polypeptide 9	601130	*****		ARG144CYS

(hydroxylation of tolbutamide)/CYP2C9 cytochrome P450, subfamily IIC, polypeptide 9 (hydroxylation of tolbutamide)/CYP2C9	601130	*****	Tyr358/Cys
cytochrome P450, subfamily IIC, polypeptide 9 (hydroxylation of tolbutamide)/CYP2C9	601130	*****	Gly417/Asp
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030	NM_00010 6	G>C Glutamine intron splice site Histidine (splicing defect; does not splice intron at 3' site)
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030	NM_00010 6	G>A Glycine intron splice site Arginine (splicing defect; does not splice intron at 3' site)
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030	NM_00010 6	G>C Valine 136 Valine
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030	NM_00010 6	G>C Serine 486

subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	6	Threonine
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030 NM_00010 6	insertion Arginine (A)>deletion (A) Glycine (frameshift - premature stop next codon)
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030 NM_00010 6	A>C Histidine 324 Proline
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030 NM_00010 6	G>T Glycine 169 Stop Codon
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030 NM_00010 6	G>A Glycine 42 Arginine
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030 NM_00010 6	insertion Tryptophan (T)>deletion (T) Glycine

polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030	NM_00010 6	C>T Arginine 296 Cysteine	(frameshift - premature stop at next codon)
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030	NM_00010 6	C>T Proline 34 Serine	
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030	NM_00010 6	Deletion Leucine (T)>Insertion (T) Leucine (frameshift - premature stop)	
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030	NM_00010 6	G>A Serine 401 Serine	
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030	NM_00010 6	G AA>deletion Lysine 281 Lysine deletion	

(debrisoquine hydroxylation)/CYP2D 6	124030	NM_00010 6	A>G Histidine 94 Arginine
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030	NM_00010 6	T>C Leucine 421 Proline
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030	NM_00010 6	AG A>deletion Lysine 281 Lysine deletion
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030	NM_00010 6	C>G Threonine 98 Threonine
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D 6	124030	NM_00010 6	C>G Leucine 91 Valine

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hydroxylation)/CYP2D ⁶ cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D ⁶	124030	NM_00010 ₆	G>A Glycine 212 Glutamic acid
cytochrome P450, subfamily IID, polypeptide 6 (debrisoquine hydroxylation)/CYP2D ⁶	124030	NM_00010 ₆	C>T Phenylalanine 112 Phenylalanine
cytochrome P450, subfamily IIE (ethanol inducible)/CYP2E cytochrome P450, subfamily IIE (ethanol inducible)/CYP2E cytochrome P450, subfamily IIE (ethanol inducible)/CYP2E cytochrome P450, subfamily IIE (ethanol inducible)/CYP2E cytochrome P450, subfamily IIE (ethanol inducible)/CYP2E cytochrome P450, subfamily IIE (ethanol inducible)/CYP2E cytochrome P450, subfamily IIE (ethanol inducible)/CYP2E	124040 124040 124040 124040 124040 124040 124040 124040	J02843 J02843 J02843 J02843 J02843 J02843 J02843 J02843	(GGAT)n.(CCTA)n repeat element intron MspI PstI RsaI XmnI Taq I

inducible)/CYP2E cytochrome P450, subfamily IIF (ethoxycoumarin monooxygenase), polypeptide 1/CYP2F1	124070	NM_00077 4	none found	
cytochrome P450, subfamily IIIA (niphedipine oxidase), polypeptide 3/CYP3A3	124010	NM_00077 6	a-g PROMOTER	
cytochrome P450, subfamily IIIA (niphedipine oxidase), polypeptide 3/CYP3A3	124010	NM_00077 6	-292 a-g	
cytochrome P450, subfamily IIIA (niphedipine oxidase), polypeptide 3/CYP3A3	124010	NM_00077 6		Thr431Ile
cytochrome P450, subfamily IIIA (niphedipine oxidase), polypeptide 3/CYP3A3	124010	NM_00077 6		Trp392Val
cytochrome P450, subfamily IIIA (niphedipine oxidase), polypeptide 3/CYP3A3	124010	NM_00077 6		Ile224 replacing Thr224-Val225
Dehydroepiandrosteron e (DHEA)-preferring sulfotransferase, family 2A, member 1/SULT2A1	125263	NM_00316 7		Met 57 --> Thr

Dehydroepiandrosterone (DHEA)-preferring sulfotransferase, family 2A, member 1/SULT2A1	125263	NM_003167	Glu 186 --> Val
Dihydrolipoamide dehydrogenase (E3 component of pyruvate dehydrogenase complex, 2-oxo-glutarate complex, branched chain keto acid dehydrogenase complex)	246900	J03490	LYS37GLU
Dihydrolipoamide dehydrogenase (E3 component of pyruvate dehydrogenase complex, 2-oxo-glutarate complex, branched chain keto acid dehydrogenase complex)	246900	J03490	PRO453LEU
Dihydrolipoamide dehydrogenase (E3 component of pyruvate dehydrogenase complex, 2-oxo-glutarate complex, branched chain keto acid dehydrogenase complex)	246900	J03490	1-BP INS frameshift

complex) Dihydrolipoamide dehydrogenase (E3 component of pyruvate dehydrogenase complex, 2-oxo- glutarate complex, branched chain keto acid dehydrogenase complex)	246900	J03490	GLY229CYS
Dihydrolipoamide dehydrogenase (E3 component of pyruvate dehydrogenase complex, 2-oxo- glutarate complex, branched chain keto acid dehydrogenase complex)	246900	J03490	Y35X
Dihydrolipoamide dehydrogenase (E3 component of pyruvate dehydrogenase complex, 2-oxo- glutarate complex, branched chain keto acid dehydrogenase complex)	246900	J03490	R460G
Dihydrolipoamide S- acetyltransferase (E2 component of pyruvate	245349	AF001437	85-BP DEL

dehydrogenase complex)				
Dihydrolipoamide S-acetyltransferase (E2 component of pyruvate dehydrogenase complex)	245349	AF001437	69-BP DEL	
Dihydrolipoamide S-acetyltransferase (E2 component of pyruvate dehydrogenase complex)	245349	AF001437	4-BP DEL	
dihydropyrimidine dehydrogenase DPD	274270	U09178	deltaC1897	
dihydropyrimidine dehydrogenase DPD	274270	U09178	Arg21Gln	
dihydropyrimidine dehydrogenase DPD	274270	U09178	Val335Leu	
dihydropyrimidine dehydrogenase DPD	274270	U09178	Glu386Ter	
dihydropyrimidine dehydrogenase DPD	274270	U09178	165-BP DEL	
dihydropyrimidine dehydrogenase DPD	274270	U09178	Ser534Asn	
dihydropyrimidine dehydrogenase DPD	274270	U09178	Ile543Val	
dihydropyrimidine dehydrogenase DPD	274270	U09178	Val732Ile	
dihydropyrimidine dehydrogenase DPD	274270	U09178	4-BP DEL 296 to 299 (TCAT)	
dihydropyrimidine dehydrogenase DPD	274270	U09178	1-BP DEL, 1897C Frameshift	

dehydrogenase DPD	274270	U09178	ARG886HIS
dihydropyrimidine			
dehydrogenase DPD	274270	U09178	CYS29ARG
dihydropyrimidine			
dehydrogenase DPD	274270	U09178	ASP974VAL
dihydropyrimidine			
dehydrogenase DPD	126455	L24178	5' TaqI RFLP
Dopamine Transporter/ DAT1			
Dopamine Transporter/ DAT1	126455	L24178	9-repeat allele
Dopamine Transporter/ DAT1	126455	L24178	40-bp VNTR in the 3'-untranslated
eosinophil peroxidase/EPX	131399		ARG286HIS
eosinophil peroxidase/EPX	131399		INS G, NT1537
epoxide hydrolase 1/EPHX1 (microsomal)	132810	NM_000120	TYR113HIS
epoxide hydrolase 1/EPHX1 (microsomal)	132810	NM_000120	Exon 3 T to C
epoxide hydrolase 1/EPHX1 (microsomal)	132810	NM_000120	His/Arg 139
epoxide hydrolase 2/EPHX2 (cytosolic)	132811	*****	none found
ESTERASE A-4	133220		none found
ESTERASE A-5; ESA5	133230		none found

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ESTERASE B	133260		none found	
ESTERASE B3; ESB3	133290		none found	
ESTERASE C	133270		none found	
Estrogen-preferring sulfotransferase/STE	600043	NM_00542 _0	none found	
familial intrahepatic cholestasis 1/FIC1	602397	NM_00560 _3		GLY308VAL
familial intrahepatic cholestasis 1/FIC1	602397	NM_00560 _3		GLY892ARG
familial intrahepatic cholestasis 1/FIC1	602397	NM_00560 _3		LEU288SER
familial intrahepatic cholestasis 1/FIC1	602397	NM_00560 _3	2097T-C, +2 splice variant	
familial intrahepatic cholestasis 1/FIC1	602397	NM_00560 _3		1.4-KB DEL
familial intrahepatic cholestasis 1/FIC1	602397	NM_00560 _3		ILE661THR
familial intrahepatic cholestasis 1/FIC1	602397	NM_00560 _3	9-BP DEL deletion GNR (795-797)	
familial intrahepatic cholestasis 1/FIC1	602397	NM_00560 _3	none found	
folypolyglutamate synthetase FPGS	136510	M98045		
gamma-glutamyl hydrolase GGH	601509	U55206	none found	
GAMMA- GLUTAMYLTRANSF ERASE 2	137181		none found	
Glucose-6-phosphate dehydrogenase	305900	X03674		ASN126ASP
Glucose-6-phosphate dehydrogenase	305900	X03674		VAL68MET
Glucose-6-phosphate dehydrogenase	305900	X03674		ASN126ASP

dehydrogenase	305900	X03674	ALA335THR
Glucose-6-phosphate dehydrogenase			
Glucose-6-phosphate dehydrogenase	305900	X03674	GLU156LYS
Glucose-6-phosphate dehydrogenase	305900	X03674	GLY163SER
Glucose-6-phosphate dehydrogenase	305900	X03674	SER188PHE
Glucose-6-phosphate dehydrogenase	305900	X03674	ASP58ASN
Glucose-6-phosphate dehydrogenase	305900	X03674	ARG393HIS
Glucose-6-phosphate dehydrogenase	305900	X03674	GLY447ARG
Glucose-6-phosphate dehydrogenase	305900	X03674	ASP282HIS
Glucose-6-phosphate dehydrogenase	305900	X03674	PHE216LEU
Glucose-6-phosphate dehydrogenase	305900	X03674	LYS386GLU
Glucose-6-phosphate dehydrogenase	305900	X03674	ARG387HIS
Glucose-6-phosphate dehydrogenase	305900	X03674	CYS385ARG
Glucose-6-phosphate dehydrogenase	305900	X03674	GLY410CYS
Glucose-6-phosphate dehydrogenase	305900	X03674	ARG285HIS
Glucose-6-phosphate dehydrogenase	305900	X03674	NT1116, G-A

Glucose-6-phosphate dehydrogenase	305900	X03674	NT1311, C-T	
Glucose-6-phosphate dehydrogenase	305900	X03674	EX6, -60, C-G	
Glucose-6-phosphate dehydrogenase	305900	X03674		ARG454HIS
Glucose-6-phosphate dehydrogenase	305900	X03674		ARG459LEU
Glucose-6-phosphate dehydrogenase	305900	X03674		GLU398LYS
Glucose-6-phosphate dehydrogenase	305900	X03674		ASP181VAL
Glucose-6-phosphate dehydrogenase	305900	X03674		ASN126ASP
Glucose-6-phosphate dehydrogenase	305900	X03674		VAL213LEU
Glucose-6-phosphate dehydrogenase	305900	X03674		ARG393HIS
Glucose-6-phosphate dehydrogenase	305900	X03674		VAL291MET
Glucose-6-phosphate dehydrogenase	305900	X03674		ARG227LEU
Glucose-6-phosphate dehydrogenase	305900	X03674		LEU323PRO
Glucose-6-phosphate dehydrogenase	305900	X03674		ARG463HIS
Glucose-6-phosphate dehydrogenase	305900	X03674		ASN363LYS
Glucose-6-phosphate dehydrogenase	305900	X03674		ARG198CYS
Glucose-6-phosphate dehydrogenase	305900	X03674		SER106CYS

dehydrogenase				
Glucose-6-phosphate	305900	X03674	ARG182TRP	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	ARG198CYS	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	ASN165ASP	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	ARG198PRO	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	ARG227GLN	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	PRO353SER	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	ARG387CYS	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	VAL394LEU	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	GLY410ASP	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	ARG439PRO	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	ILE35DEL	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	GLU317LYS	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	ILE48THR	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	HIS32ARG	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	GLY131VAL	
dehydrogenase				

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Glucose-6-phosphate dehydrogenase	305900	X03674	LEU342PHE
Glucose-6-phosphate dehydrogenase	305900	X03674	ALA44GLY
Glucose-6-phosphate dehydrogenase	305900	X03674	PHE173LEU
Glucose-6-phosphate dehydrogenase	305900	X03674	ASP181VAL
Glucose-6-phosphate dehydrogenase	305900	X03674	PRO467ARG
Glucose-6-phosphate dehydrogenase	305900	X03674	ALA361VAL
Glucose-6-phosphate dehydrogenase	305900	X03674	24-BP DEL, NT953
Glucose-6-phosphate dehydrogenase	305900	X03674	Pro172-->Ser
Glucose-6-phosphate dehydrogenase	305900	X03674	R459L
Glucose-6-phosphate dehydrogenase	305900	X03674	R463H
Glucose-6-phosphate dehydrogenase	305900	X03674	C-->T 563
Glucose-6-phosphate dehydrogenase	305900	X03674	376A-->G
Glucose-6-phosphate dehydrogenase	305900	X03674	202G-->A
Glucose-6-phosphate dehydrogenase	305900	X03674	680G-->T
Glucose-6-phosphate dehydrogenase	305900	X03674	968T-->C
Glucose-6-phosphate dehydrogenase	305900	X03674	563C-->T

dehydrogenase	305900	X03674	202G-->A
Glucose-6-phosphate dehydrogenase			
Glucose-6-phosphate dehydrogenase	305900	X03674	1311C-->T
Glucose-6-phosphate dehydrogenase	305900	X03674	406 C-->T
Glucose-6-phosphate dehydrogenase	305900	X03674	1155 C-->G
Glucose-6-phosphate dehydrogenase	305900	X03674	185 C-->T, 62 Pro-->Phe
Glucose-6-phosphate dehydrogenase	305900	X03674	695 G-->A
Glucose-6-phosphate dehydrogenase	305900	X03674	1387 C-->T 463 Arg-->Cys
Glucose-6-phosphate dehydrogenase	305900	X03674	1246 G-->A
Glucose-6-phosphate dehydrogenase	305900	X03674	1160 G-->A
Glucose-6-phosphate dehydrogenase	305900	X03674	Bcl I
Glucose-6-phosphate dehydrogenase	305900	X03674	202 G-->A
Glucose-6-phosphate dehydrogenase	305900	X03674	335 Ala-->Thr
Glucose-6-phosphate dehydrogenase	305900	X03674	G-->T at nt 1376
Glucose-6-phosphate dehydrogenase	305900	X03674	G-->A at 1388
Glucose-6-phosphate dehydrogenase	305900	X03674	A-->G at nt 95

Glucose-6-phosphate dehydrogenase	305900	X03674	A209G
Glucose-6-phosphate dehydrogenase	305900	X03674	493 A-->G
Glucose-6-phosphate dehydrogenase	305900	X03674	592 C-->T
Glucose-6-phosphate dehydrogenase	305900	X03674	844 G>C
Glucose-6-phosphate dehydrogenase	305900	X03674	224 T-->C
Glucose-6-phosphate dehydrogenase	305900	X03674	488 G-->A
Glucose-6-phosphate dehydrogenase	305900	X03674	833 C-->T
Glucose-6-phosphate dehydrogenase	305900	X03674	1360C-->T 454Arg-->Cys
Glucose-6-phosphate dehydrogenase	305900	X03674	383T-->C 128Leu-->Pro
Glucose-6-phosphate dehydrogenase	305900	X03674	208T-->C 70Tyr-->His
Glucose-6-phosphate dehydrogenase	305900	X03674	497G-->A 166Arg-->His
Glucose-6-phosphate dehydrogenase	305900	X03674	A-->G 1138 val380iso
Glucose-6-phosphate dehydrogenase	305900	X03674	T-->C 1139 iso380thr
Glucose-6-phosphate dehydrogenase	305900	X03674	C-->G 1177 gly393arg
Glucose-6-phosphate dehydrogenase	305900	X03674	C->T 1187
Glucose-6-phosphate dehydrogenase	305900	X03674	527A-->G

dehydrogenase				
Glucose-6-phosphate	305900	X03674	1003G-->A	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	1159C-->T	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	1160G-->A	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	1229G-->A	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	1246G-->A	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	1361G-->A	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	C-->T 563	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	C-->T 1311	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	241 C to T	
dehydrogenase				
Glucose-6-phosphate	305900	X03674	487 G-->A	
dehydrogenase				P197L
glutathione peroxidase	138320	Y00433		
GPx1				
glutathione peroxidase	138320	Y00433	1167T/C Silent	
GPx1				
glutathione peroxidase	138319	X68314	A/T intron	
GPx2				
glutathione peroxidase	138319	X68314	TC repeats intron	
GPx2				
glutathione peroxidase	138321	X58295	none found	
GPx3				

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glutathione peroxidase GPx4	138322	X71973	none found
glutathione peroxidase GPx5	603435	AJ005277	none found
Glutathione-S- transferase 1/MGST1 (microsomal)	138330	AH003674	none found
Glutathione-S- transferase 2/MGST2 (microsomal)	601733	NM_002413	none found
Glutathione-S- transferase 6	138391	*****	none found
glutathione-S- transferase GSTM3	138390	J05459	3bp deletion intron 6
glutathione-S- transferase GSTT1	600436	X79389	null genotype
glutathione-S- transferase GSTT2	600437	L38503	none found
Glutathione-S- transferase, alpha 1/GSTA1	138359	L13269	none found
Glutathione-S- transferase, alpha 2/GSTA2	138360	M15872	none found
Glutathione-S- transferase, kappa 1/GSTK1	602321	*****	none found
Glutathione-S- transferase, mu 1- like/GSTM1L	138270	*****	none found
Glutathione-S-	138350	J03817	gene deletion

transferase, mu 1/GSTM1	138380	NM_00084 8	none found	
Glutathione-S- transferase, mu 2/GSTM2 (muscle)	138333	NM_00085 0	none found	
Glutathione-S- transferase, mu 4/GSTM4	138385	NM_00085 1	none found	
Glutathione-S- transferase, mu 5/GSTM5 (brain/lung)	134660	NM_00085 2	ILE104VAL	
Glutathione-S- transferase, pi/GSTP1	134660	NM_00085 2	ALA113VAL	
Glutathione-S- transferase, pi/GSTP1	134660	NM_00085 2	BamHI	
Glutathione-S- transferase, pi/GSTP1	134660	NM_00085 2	(ATAAA)n upstream of gene none found	
Glutathione-S- transferase, pi/GSTP1	138610			
GLYCOPROTEIN, ALPHA-1-ACID, OF SERUM, TYPE 2	602403	X92106	ILE443VAL	
H.sapiens mRNA for bleomycin hydrolase	164012	X61498		
H.sapiens mRNA for NF-kB subunit			A939G	
histamine N- methyltransferase			Thr105Ile	
histamine N- methyltransferase				
Homo sapiens ABC	MOATB	AF071202	none found	

transporter MOAT-B (MOAT-B) mRNA, complete cds	103730	M12272	ile349-to-val
Homo sapiens alcohol dehydrogenase class I gamma subunit (ADH3) mRNA, complete cds	103730	M12272	ARG271GLU
Homo sapiens alcohol dehydrogenase class I gamma subunit (ADH3) mRNA, complete cds	601176	L35546	none found
Homo sapiens gamma- glutamylcysteine synthetase light subunit mRNA, complete cds	264700	AB005038	ARG107HIS
Homo sapiens mRNA for 25-hydroxyvitamin D3 1-alpha- hydroxylase, complete cds	264700	AB005038	GLY125GLU
Homo sapiens mRNA for 25-hydroxyvitamin D3 1-alpha- hydroxylase, complete cds	264700	AB005038	ARG335PRO

Homo sapiens mRNA for 25-hydroxyvitamin D3 1-alpha- hydroxylase, complete cds	264700	AB005038	PRO382SER
Homo sapiens mRNA for 25-hydroxyvitamin D3 1-alpha- hydroxylase, complete cds	264700	AB005038	1-BP DEL frameshift
Homo sapiens mRNA for 25-hydroxyvitamin D3 1-alpha- hydroxylase, complete cds	264700	AB005038	1-BP DEL, 958G
Homo sapiens mRNA for 25-hydroxyvitamin D3 1-alpha- hydroxylase, complete cds	264700	AB005038	7-BP DUP
Homo sapiens mRNA for carbonyl reductase 3, complete cds	603608	AB004854	none found
Homo sapiens paraoxonase 2 (PON2) mRNA, complete cds	602447	L48513	CYS311SER
Homo sapiens paraoxonase 2 (PON2) mRNA, complete cds	602447	L48513	ALA148GLY
Homo sapiens	602720	L48516	none found

paraoxonase 3 (PON3) mRNA, 3' end of cds	602239	AF005418	none found
Homo sapiens retinoic acid hydroxylase mRNA, complete cds	SMRP	AB005659	none found
Homo sapiens SMRP mRNA, complete cds	600086	U07821	none found
Human alcohol dehydrogenase (ADH7) mRNA, complete cds	103735	M68895	none found
Human alcohol dehydrogenase 6 gene, complete cds	103710	M29872	MspI
Human alcohol dehydrogenase class III (ADH5) mRNA, complete cds	601917	U37519	none found
Human aldehyde dehydrogenase (ALDH8) mRNA, complete cds	600463	U07919	none found
Human aldehyde dehydrogenase 6 mRNA, complete cds	600466	U10868	none found
Human aldehyde dehydrogenase ALDH7 mRNA, complete cds	100660	M74542	none found
Human aldehyde dehydrogenase type III (ALDHIII) mRNA,			

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complete cds	138600	M13692	VAL156MET
Human alpha-1 acid glycoprotein mRNA, complete cds	138600	M13692	GLN20ARG
Human alpha-1 acid glycoprotein mRNA, complete cds	151530	M22324	none found
Human aminopeptidase N/CD13 mRNA encoding aminopeptidase N, complete cds	600338	L32179	none found
Human arylacetamide deacetylase mRNA, complete cds	114830	J04056	none found
Human carbonyl reductase mRNA, complete cds	103720	M24317	ARG47HIS
Human class I alcohol dehydrogenase (ADH2) beta-1 subunit mRNA, complete cds	103720	M24317	ARG369CYS
Human class I alcohol dehydrogenase (ADH2) beta-1 subunit mRNA, complete cds	103740	M15943	-75A-->C
Human class II alcohol dehydrogenase (ADH4) pi subunit mRNA, complete cds			

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Human factor KBF1 mRNA, complete cds	164011	M55643	(CA)n	
Human fatty aldehyde dehydrogenase (FALDH) mRNA, complete cds	270200	L47162	1-BP DEL, 525T	
Human fatty aldehyde dehydrogenase (FALDH) mRNA, complete cds	270200	L47162	1-BP DEL, 808G	
Human fatty aldehyde dehydrogenase (FALDH) mRNA, complete cds	270200	L47162	3-BP DEL/21-BP INS	
Human fatty aldehyde dehydrogenase (FALDH) mRNA, complete cds	270200	L47162		ALA314GLY
Human fatty aldehyde dehydrogenase (FALDH) mRNA, complete cds	270200	L47162		PRO315ALA
Human fatty aldehyde dehydrogenase (FALDH) mRNA, complete cds	270200	L47162		CYS214TYR
Human fatty aldehyde dehydrogenase (FALDH) mRNA, complete cds	270200	L47162		PRO315SER
Human fatty aldehyde dehydrogenase (FALDH) mRNA, complete cds	270200	L47162	2-BP DEL, 1297GA frameshift	

dehydrogenase (FALDH) mRNA, complete cds	270200	L47162	5-BP INS, NT1311	
Human fatty aldehyde dehydrogenase (FALDH) mRNA, complete cds	602733	U34252		CYS115SER
Human gamma- aminobutyraldehyde dehydrogenase mRNA, complete cds	230450	M90656	A-->T 1109 His370Leu	
Human gamma- glutamylcysteine synthetase (GCS) mRNA, complete cds	230450	M90656	(CAGC)n 1972-1975	
Human gamma- glutamylcysteine synthetase (GCS) mRNA, complete cds	137168	M64099	none found	
Human gamma- glutamyl transpeptidase- related protein (GGT- Rel) mRNA, complete cds	601002	U34683		ARG164GLN
Human glutathione synthetase mRNA, complete cds	601002	U34683	1-BP DEL frameshift	
Human glutathione synthetase mRNA, complete cds	601002	U34683		ARG267TRP

synthetase mRNA, complete cds	601002	U34683	ARG283CYS
Human glutathione synthetase mRNA, complete cds	601002	U34683	ARG125CYS
Human glutathione synthetase mRNA, complete cds	601002	U34683	PRO314LEU
Human glutathione synthetase mRNA, complete cds	601002	U34683	6-BP DEL VAL-GLN del
Human glutathione synthetase mRNA, complete cds	601002	U34683	ASP219GLY
Human kidney mRNA for catalase	115500	X04076	IVS4, G-A, +5
Human kidney mRNA for catalase	115500	X04076	A to T -21
Human kidney mRNA for catalase	115500	X04076	C to A -20
Human kidney mRNA for catalase	115500	X04076	C to T -18
Human kidney mRNA for catalase	115500	X04076	T to C 4
Human kidney mRNA for catalase	115500	X04076	T to C 44
Human kidney mRNA for catalase	115500	X04076	T to C 49

Human kidney mRNA for catalase	115500	X04076	C to T 12	
Human kidney mRNA for catalase	115500	X04076	C to A 27	
Human kidney mRNA for catalase	115500	X04076	358 T-->del	
Human kidney mRNA for catalase	115500	X04076	MspI	
Human messenger RNA for serum albumin (HSA)	103600	V00494	ARG-2HIS	
Human messenger RNA for serum albumin (HSA)	103600	V00494	ARG-1GLN	
Human messenger RNA for serum albumin (HSA)	103600	V00494	ARG-1PRO	
Human messenger RNA for serum albumin (HSA)	103600	V00494	ASP1VAL	
Human messenger RNA for serum albumin (HSA)	103600	V00494	HIS3GLN	
Human messenger RNA for serum albumin (HSA)	103600	V00494	ARG114GLY	
Human messenger RNA for serum albumin (HSA)	103600	V00494	GLU119LYS	
Human messenger RNA for serum	103600	V00494	ASP269GLY	

albumin (HSA) Human messenger RNA for serum albumin (HSA)	103600	V00494	LYS313ASN
Human messenger RNA for serum albumin (HSA)	103600	V00494	ALA320THR
Human messenger RNA for serum albumin (HSA)	103600	V00494	ARG-2CYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	GLU321LYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	GLU354LYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	GLU358LYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	ASP365HIS
Human messenger RNA for serum albumin (HSA)	103600	V00494	LYS372GLU
Human messenger RNA for serum albumin (HSA)	103600	V00494	ASP375ASN
Human messenger RNA for serum albumin (HSA)	103600	V00494	GLU376LYS

Human messenger RNA for serum albumin (HSA)	103600	V00494	GLU382LYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	GLU501LYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	LYS541GLU
Human messenger RNA for serum albumin (HSA)	103600	V00494	ASP550GLY
Human messenger RNA for serum albumin (HSA)	103600	V00494	ASP563ASN
Human messenger RNA for serum albumin (HSA)	103600	V00494	GLU565LYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	GLU570LYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	LYS573GLU
Human messenger RNA for serum albumin (HSA)	103600	V00494	LYS574ASN
Human messenger RNA for serum albumin (HSA)	103600	V00494	IVS6, A-G, -2
Human messenger RNA for serum albumin (HSA)	103600	V00494	EX14DEL

RNA for serum albumin (HSA)	103600	V00494	LYS536GLU
Human messenger RNA for serum albumin (HSA)	103600	V00494	ARG-2CYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	ARG-1LEU
Human messenger RNA for serum albumin (HSA)	103600	V00494	GLN580LYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	GLU60LYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	GLU82LYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	ASP494ASN
Human messenger RNA for serum albumin (HSA)	103600	V00494	ASP365VAL
Human messenger RNA for serum albumin (HSA)	103600	V00494	HIS128ARG
Human messenger RNA for serum albumin (HSA)	103600	V00494	IVS13DS, G-C, +1

albumin (HSA) Human messenger RNA for serum albumin (HSA)	103600	V00494	LYS240GLU
Human messenger RNA for serum albumin (HSA)	103600	V00494	AAT267AAAT frameshift
Human messenger RNA for serum albumin (HSA)	103600	V00494	ARG218HIS
Human messenger RNA for serum albumin (HSA)	103600	V00494	HIS3TYR
Human messenger RNA for serum albumin (HSA)	103600	V00494	LYS225GLN
Human messenger RNA for serum albumin (HSA)	103600	V00494	LYS276ASN
Human messenger RNA for serum albumin (HSA)	103600	V00494	TGC567GC frameshift
Human messenger RNA for serum albumin (HSA)	103600	V00494	TYR140CYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	ASP63ASN
Human messenger RNA for serum albumin (HSA)	103600	V00494	CYS177PHE

Human messenger RNA for serum albumin (HSA)	103600	V00494	GLN268ARG
Human messenger RNA for serum albumin (HSA)	103600	V00494	ASN318LYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	GLU333LYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	GLU376ASN
Human messenger RNA for serum albumin (HSA)	103600	V00494	GLU479LYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	GLU505LYS
Human messenger RNA for serum albumin (HSA)	103600	V00494	ARG218PRO
Human messenger RNA for serum albumin (HSA)	103600	V00494	LEU66PRO
Human messenger RNA for serum albumin (HSA)	103600	V00494	Arg218His
Human messenger RNA for serum albumin (HSA)	103600	V00494	HaeIII intron 7
Human mitochondrial	600125	L13286	none found

1,25-dihydroxyvitamin D3 24-hydroxylase mRNA, complete cds Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	4-BP DEL	
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	7-BP DEL	
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709		ARG378HIS
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709		LYS313DEL
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	2-BP DEL frameshift	
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	20-BP DEL, EX11DEL	
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	21-BP INS	

Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	ARG234GLY
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	ARG302CYS
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	4-BP INS frameshift
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	ASP258ALA
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	PHE205LEU
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	TYR243ASN
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	ASP315ASN
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	MET282LEU

1.2.4.1) Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	-BP INS FS141TER	
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	ARG10PRO	
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	13-BP INS, EX10	
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1)	312170	X52709	36-BP INS	
Human mRNA for dipeptidase	179780	D13138	none found	
Human mRNA for glutathione reductase (EC 1.6.4.2)	138300	X15722	none found	
Human mRNA for pancreatic gamma- glutamyltransferase	231950	X60069	none found	
Human multidrug resistance-associated protein homolog (MRP3)	CMOAT2	U83659	none found	
Human Na/taurocholate	182396	L21893	none found	

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cotransporting polypeptide mRNA, complete cds	Monoamine Oxidase A; MAOA	309850	M69226	23-bp VNTR
	Monoamine Oxidase A; MAOA	309850	M69226	3rd base of codon 941 941 G>T
	Monoamine Oxidase A; MAOA	309850	M69226	A1026T ProlineProline
	Monoamine Oxidase A; MAOA	309850	M69226	A1559G LysineArginine
	Monoamine Oxidase A; MAOA	309850	M69226	A385C ArginineArginine ^e
	Monoamine Oxidase A; MAOA	309850	M69226	C1410T Aspartic AcidAspartic Acid
	Monoamine Oxidase A; MAOA	309850	M69226	C886T GlutamineTermini nation codon
	Monoamine Oxidase A; MAOA	309850	M69226	C886T Glutamine296T ermination codon
	Monoamine Oxidase A; MAOA	309850	M69226	exon 14 -- RFLP (EcoRV enzyme)
	Monoamine Oxidase A; MAOA	309850	M69226	length of (CA) _n repeat
	Monoamine Oxidase A; MAOA	309850	M69226	RFLP (EcoRV enzyme)
	Monoamine Oxidase A; MAOA	309850	M69226	RFLP (Pst I)
	Monoamine Oxidase A; MAOA	309850	M69226	T891G

Monoamine Oxidase A; MAOA	309850	M69226	T891G Arginine
Monoamine Oxidase B; MAOB	309860	M69177	e (GT)n repeat
Monoamine Oxidase B; MAOB	309860	M69177	36 bases upstream from intron 13-exon 14 boundary
Monoamine Oxidase B; MAOB	309860	M69177	A at position 644 of intron 13
Monoamine Oxidase B; MAOB	309860	M69177	G at position 644 of intron 13
Monoamine Oxidase B; MAOB	309860	M69177	RFLP (MaeIII enzyme)
multidrug resistance associated protein MRP1	158343	L05628	none found
multidrug resistance associated protein MRP2	601107	U83659	none found
multidrug resistance protein MDR1	171050	X96395	HindIII
multidrug resistance protein MDR1	171050	X96395	Ser893Ala
multidrug resistance protein MDR1	171050	X96395	GLY185VAL
multidrug resistance protein MDR3/P- glycoprotein 3/PGY3	602347	X06181	none found
myeloperoxidase/MPO	254600		ARG569TRP
myeloperoxidase/MPO	254600		TYR173CYS
myeloperoxidase/MPO	254600		MET251THR

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myeloperoxidase/MPO	254600	G to A in the promoter -463 G/A
myeloperoxidase/MPO	254600	
myeloperoxidase/MPO	254600	Dinucleotide repeat
myeloperoxidase/MPO	254600	EcoRV RFLP
myeloperoxidase/MPO	254600	PstI.
N-acetyltransferase 1/arylamine acetylase 1/NAT1	108345	NM_000662 POLYADENYLATION SIGNAL VARIANT
N-acetyltransferase 1/arylamine acetylase 1/NAT1	108345	NM_000662 VAL149ILE
N-acetyltransferase 1/arylamine acetylase 1/NAT1	108345	NM_000662 C1095A
N-acetyltransferase 1/arylamine acetylase 1/NAT1	108345	NM_000662 T1088A
N-acetyltransferase 1/arylamine acetylase 1/NAT1	108345	NM_000662 C1095A
N-acetyltransferase 1/arylamine acetylase 1/NAT1	108345	NM_000662 9 bp deletion
N-acetyltransferase 1/arylamine acetylase 1/NAT1	108345	NM_000662 G560A
N-acetyltransferase 1/arylamine acetylase 1/NAT1	108345	NM_000662 C559T
N-acetyltransferase 1/arylamine acetylase 1/NAT1	108345	NM_000662 C190T

1/arylamide acetylase 1/NAT1	2				
N-acetyltransferase 1/arylamide acetylase 1/NAT1	108345	NM_000666_2	350-351 (GG to CC)		
N-acetyltransferase 1/arylamide acetylase 1/NAT1	108345	NM_000666_2	497-499 (GGG to CCC)		
N-acetyltransferase 1/arylamide acetylase 1/NAT1	108345	NM_000666_2	C97T		
N-acetyltransferase 1/arylamide acetylase 1/NAT1	108345	NM_000666_2	C190T		
N-acetyltransferase 1/arylamide acetylase 1/NAT1	108345	NM_000666_2	T402C		
N-acetyltransferase 1/arylamide acetylase 1/NAT1	108345	NM_000666_2	G445A		
N-acetyltransferase 1/arylamide acetylase 1/NAT1	108345	NM_000666_2	G459A		
N-acetyltransferase 1/arylamide acetylase 1/NAT1	108345	NM_000666_2	T640G		
N-acetyltransferase 1/arylamide acetylase 1/NAT1	108345	NM_000666_2	C559T		
N-acetyltransferase 1/arylamide acetylase 1/NAT1	108345	NM_000666_2	G560A		

1/NAT1 N-acetyltransferase 1/arylamide acetylase	108345	NM_00066 2	A613G	
1/NAT1 N-acetyltransferase 1/arylamide acetylase	108345	NM_00066 2	A752T	
1/NAT1 N-acetyltransferase 1/arylamide acetylase	108345	NM_00066 2	T777C	
1/NAT1 N-acetyltransferase 1/arylamide acetylase	108345	NM_00066 2	G781A	
1/NAT1 N-acetyltransferase 1/arylamide acetylase	108345	NM_00066 2	A787G	
1/NAT1 N-acetyltransferase 1/arylamide acetylase	108345	NM_00066 2		Arg187 to a stop codon
1/NAT1 N-acetyltransferase 1/arylamide acetylase	108345	NM_00066 2		Arg187 to Gln
1/NAT1 N-acetyltransferase 1/arylamide acetylase	108345	NM_00066 2	-344 (C-->T)	
1/NAT1 N-acetyltransferase 1/arylamide acetylase	108345	NM_00066 2	640 T-->G Ser-->Ala	
1/NAT1 N-acetyltransferase 2/arylamide acetylase	243400	NM_00001 5	ARG197GLN	

N-acetyltransferase 2/arylamine acetylase 2/NAT2	243400	NM_000015	ILE114THR
N-acetyltransferase 2/arylamine acetylase 2/NAT2	243400	NM_000015	LYS268ARG
N-acetyltransferase 2/arylamine acetylase 2/NAT2	243400	NM_000015	857G-A GLY-GLU
N-acetyltransferase 2/arylamine acetylase 2/NAT2	243400	NM_000015	191G-A Arg64-->Gln
N-acetyltransferase 2/arylamine acetylase 2/NAT2	243400	NM_000015	C282T (silent)
N-acetyltransferase 2/arylamine acetylase 2/NAT2	243400	NM_000015	T341C Ile114-->Thr
N-acetyltransferase 2/arylamine acetylase 2/NAT2	243400	NM_000015	481C-->T silent
N-acetyltransferase 2/arylamine acetylase 2/NAT2	243400	NM_000015	590 G-->A Arg197-->Gln
N-acetyltransferase 2/arylamine acetylase 2/NAT2	243400	NM_000015	803 A-->G Lys268-->Arg
N-acetyltransferase 2/arylamine acetylase 2/NAT2	243400	NM_000015	857 G-->A Gly286-->Glu
N-acetyltransferase 2/arylamine acetylase 2/NAT2	243400	NM_000015	C759T

2/arylamide acetylase 2/NAT2	5		
NAD(P)H menadione oxidoreductase 1, dioxin-	125860	NM_000903	609C-T pro187ser
inducible/NMOR1/diaphorase 4/DIA4			
NAD(P)H menadione oxidoreductase 2, dioxin-	160998	NM_000904	none found
inducible/NMOR2			
NEUROPATHY	603197		none found
TARGET ESTERASE			
nicotinamide N-methyltransferase/NNMT	600008	NM_006169	eight SNPs within intron 1
O6 alkylguanine-DNA alkyltransferase	156569	M60761	GGA to AGA gly160arg
O6 alkylguanine-DNA alkyltransferase	156569	M60761	1034A>G
O6 alkylguanine-DNA alkyltransferase	156569	M60761	1099C>T
O6 alkylguanine-DNA alkyltransferase	156569	M60761	79G>T
paraoxonase 1/PON1 (arylesterase)	168820	AH004193	GLN192ARG
paraoxonase 1/PON1 (arylesterase)	168820	AH004193	MET54LEU
paraoxonase 1/PON1 (arylesterase)	168820	AH004193	Leu55Met
paraoxonase 1/PON1	168820	AH004193	CA repeat intron 4.

(arylesterase)	601250	none found	
PEPTIDE METHIONINE SULFOXIDE REDUCTASE			
Peroxisome proliferative activated receptor, alpha/PPARA	170998 NM_00503 6	none found	
Peroxisome proliferative activated receptor, delta/PPARD	600409 NM_00623 8	none found	
Peroxisome proliferative activated receptor, gamma/PPARG	601487 NM_00503 7		PRO115GLN
Peroxisome proliferative activated receptor, gamma/PPARG	601487 NM_00503 7		PRO12ALA
Peroxisome proliferative activated receptor, gamma/PPARG	601487 NM_00503 7	1-BP DEL, 472A Frameshift	
Peroxisome proliferative activated receptor, gamma/PPARG	601487 NM_00503 7		GLN286PRO
Peroxisome proliferative activated receptor, gamma/PPARG	601487 NM_00503 7		LYS319TER

Peroxisome proliferative activated receptor, gamma/PPARG	601487	NM_00503 7	ARG288His
Phenol-preferring sulfotransferase, family 1A, member 1/SULT1A1	171150	NM_00105 5	Arg213His
Phenol-preferring sulfotransferase, family 1A, member 2/SULT1A2	601292	NM_00105 4	none found
Phenol-preferring sulfotransferase, family 1A, member 3/SULT1A3	600641	L19956	none found
phenylethanolamine N- methyltransferase/PN MT	171190	NM_00268 6	BANI
PHOSPHOADENOSI NE- PHOSPHOSULFATE SYNTHETASE I	603262		none found
Pyruvate dehydrogenase (lipoamide) beta	179060	M34479	none found
RAR related orphan receptor A/RORA	600825	NM_00294 3	none found
RAR related orphan receptor C/RORC	602943	NM_00506 0	none found
reduced folate carrier	600424	U19720	none found

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RFC1

renal microsomal dipeptidase/DPEP1 (b-lactam ring hydrolysis)	179780	NM_004413	none found	
renal transport of beta-amino acids/AABT	109660		none found	
retinoic acid receptor alpha/RARA	180240	NM_000964	7-base deletion frameshift	
retinoic acid receptor alpha/RARA	180240	NM_000964	codon 411 C to T	
retinoic acid receptor alpha/RARA	180240	NM_000964		Arg272Gln
retinoic acid receptor alpha/RARA	180240	NM_000964		Met297Leu
retinoic acid receptor beta/RARB	180220	NM_000965	none found	
retinoic acid receptor gamma/RARG	180190	M57707	none found	
retinoid X receptor alpha/RXRA	180245	NM_002957	none found	
retinoid X receptor beta/RXRB	180246	X66424	none found	
retinoid X receptor gamma/RXRG	180247	U38480	none found	
serotonin transporter	182138	X70697	PstI promoter 44-bp ins/del	
serotonin transporter	182138	X70697	tandem repeat close to the promoter	
serotonin transporter	182138	X70697	two polyadenylation sites	

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serotonin transporter	182138	X70697	VNTR intron 2	silent
serotonin transporter	182138	X70697		polymorphism
Solute Carrier Family 1, Member 1; Slc1a1	133550	U08989	none found	
Solute Carrier Family 1, Member 2; Slc1a2	600300	U03505	none found	
Solute Carrier Family 1, Member 3; Slc1a3	600111	U03504	none found	
Solute carrier family 1, member 4/SLC1A4 (glutamate)	600229	NM_003038	none found	
Solute carrier family 1, member 5/SLC1A5 (neutral AA)	109190	AF105230	none found	
Solute carrier family 1, member 6 (GABA/GLU)/SLC1A6	600637	NM_005071	none found	
Solute carrier family 10, member 1/SLC10A1 (taurocholate)	182396	NM_003049	none found	
Solute carrier family 10, member 2/SLC10A2 (taurocholate)	601295	NM_000452		LEU243PRO
Solute carrier family 10, member 2/SLC10A2 (taurocholate)	601295	NM_000452		THR262MET

Solute carrier family 10, member 2/SLC10A2 (taurocholate)	601295	NM_00045 2	A171S
Solute carrier family 12, member 2/SLC12A2 (dicarboxylic acids)	604148	NM_00398 4	none found
Solute carrier family 15, member 1/SLC15A1 (peptides)	600544	U13173	none found
Solute carrier family 15, member 2/SLC15A2 (peptides)	602339	S78203	none found
Solute carrier family 16, member 1/SLC16A1 (monocarboxylic acids)	600682	NM_00305 1	none found
Solute carrier family 16, member 2/SLC16A2 (monocarboxylic acids)	300095	NM_00651 7	none found
Solute carrier family 16, member 3/SLC16A3 (monocarboxylic acids)	603877	NM_00420 7	none found
Solute carrier family 16, member 4/SLC16A4 (monocarboxylic acids)	603878	*****	none found
Solute carrier family	603879	NM_00469	none found

16, member 5/SLC16A5 (monocarboxylic acids) Solute carrier family 16, member 6/SLC16A6 (monocarboxylic acids) Solute carrier family 16, member 7/SLC16A7 (monocarboxylic acids) Solute carrier family 21, member 2/SLC21A2 (prostaglandin) Solute carrier family 21, member 3/SLC21A3 (organic anion) Solute carrier family 22, member 1- like/SLC22A1 (organic cation) Solute carrier family 22, member 1- like/SLC22A1 (organic cation) Solute carrier family 22, member 1/SLC22A2 (organic cation)	5	603880 NM_004694	none found
		603654 AF049608	none found
		601460 NM_005630	none found
		602883 NM_005075	none found
		602631 AF037064	111-BP INS
		602631 AF037064	688G-A
		602607 NM_003058	none found

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Solute carrier family 22, member 2/SLC22A2 (organic cation)	602608	NM_003058		
Solute carrier family 22, member 5/SLC22A5 (carnitine)	603377		113-BP DEL	
Solute carrier family 22, member 5/SLC22A5 (carnitine)	603377		1-BP INS, 226C	
Solute carrier family 22, member 5/SLC22A5 (carnitine)	603377			TRP132TER
Solute carrier family 22, member 5/SLC22A5 (carnitine)	603377		G-to-A transition in the last nucleotide of intron 8	
Solute carrier family 22, member 5/SLC22A5 (carnitine)	603377		1394-BP DEL	
Solute carrier family 22, member 5/SLC22A5 (carnitine)	603377		19-BP INS	
Solute carrier family 22, member 5/SLC22A5 (carnitine)	603377		171-BP DEL	
Solute carrier family 22, member 5/SLC22A5 (carnitine)	603377			ARG282TER
Solute carrier family 22, member 5/SLC22A5 (carnitine)	603377			TYR401TER

Solute carrier family 22, member 5/SLC22A5 (carnitine)	603377	1-BP DEL, 1345G	
Solute carrier family 22, member 5/SLC22A5 (carnitine)	603377		PRO478LEU
Solute carrier family 22, member 5/SLC22A5 (carnitine)	603377		TYR211CYS
Solute carrier family 22, member 5/SLC22A5 (carnitine)	603377		Arg169Gln
Solute carrier family 25, member 1/SLC25A1 (tricarboxylic acids)	190315	X96924	none found
Solute carrier family 29 (nucleosides), member 1/SLC29A1/ENT1	602193	NM_004955	none found
Solute carrier family 29 (nucleosides), member 2/SLC29A2/ENT2	602110	X86681	none found
Solute carrier family 3 member 1/SLC3A1 (aa transporter)	104614	*****	none found
Solute carrier family 5 member 6/SLC5A6 (folate, biotin, lipocate)	604024	*****	none found
Solute carrier family 6 (GABA), member 1/SLC6A1	137165	X54673	none found

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Solute carrier family 6 (betaine/GABA), member 12	603080	U27699	none found
Solute carrier family 6, member 5/SLC6A2/NAT1/NET 1 (glycine)	163970	NM_00104 3	none found
Solute carrier family 6, member 5/SLC6A5 (glycine)	604159	NM_00421 1	none found
Solute carrier family 6, member 6/SLC6A6 (taurine)	186854	U16120	Dinucleotide repeat
Solute carrier family 6, Member 9; SLC6A9 (glycine)	601019	S70612	none found
Solute carrier family 7, member 1/SLC7A1 (cationic AA)	104615	*****	TaqI
Solute carrier family 7, member 2/SLC7A2 (cationic AA)	601872	D29990	none found
Solute carrier family 7, member 4/SLC7A4 (cationic AA)	603752	*****	none found
Solute carrier family 7, member 5/SLC7A5 (neutral AA)	600182	M80244	none found
Solute carrier family 7, member 7/SLC7A7 (dibasic AA)	603593	Y18474	1181, A-T, -2 A->T

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Solute carrier family 7, member 7/SLC7A7 (dibasic AA)	603593	Y18474	543-BP DEL	
Solute carrier family 7, member 7/SLC7A7 (dibasic AA)	603593	Y18474	4-BP INS	
Solute carrier family 7, member 9/SLC7A9 (neutral AA)	604144	*****	VAL170MET	
Solute carrier family 7, member 9/SLC7A9 (neutral AA)	604144	*****	GLY105ARG	
Solute carrier family 7, member 9/SLC7A9 (neutral AA)	604144	*****	ALA182THR	
Solute carrier family 7, member 9/SLC7A9 (neutral AA)	604144	*****	GLY195ARG	
Solute carrier family 7, member 9/SLC7A9 (neutral AA)	604144	*****	GLY259ARG	
Solute carrier family 7, member 9/SLC7A9 (neutral AA)	604144	*****	2-BP DEL, 596TG	
Solute carrier family 7, member 9/SLC7A9 (neutral AA)	604144	*****	1-BP INS, 520T	
sterol-O-acyl transferase 1/SOAT1	102642	L21934	none found	
sterol-O-acyl transferase 2/SOAT2	601311	*****	none found	

Succinic semialdehyde dehydrogenase	271980	L34820	IVS9, G-T, +1	
Succinic semialdehyde dehydrogenase	271980	L34820	IVS5, G-A, +1	
SULFONYLUREA RECEPTOR 2	601439		none found	
Sulfotransferase, family 1C, member 3/SULT1C1	602385	U66036	none found	
Sulfotransferase, family 2B, member 1/SULT2B1	604125	NM_00460 5	none found	
Superoxide Dismutase 1/SOD1 (soluble)	147450	NM_00045 4		GLY37ARG
Superoxide Dismutase 1/SOD1 (soluble)	147450	NM_00045 4		LEU38VAL
Superoxide Dismutase 1/SOD1 (soluble)	147450	NM_00045 4		GLY41SER
Superoxide Dismutase 1/SOD1 (soluble)	147450	NM_00045 4		GLY41ASP
Superoxide Dismutase 1/SOD1 (soluble)	147450	NM_00045 4		HIS43ARG
Superoxide Dismutase 1/SOD1 (soluble)	147450	NM_00045 4		GLY85ARG
Superoxide Dismutase 1/SOD1 (soluble)	147450	NM_00045 4		GLY93CYS
Superoxide Dismutase 1/SOD1 (soluble)	147450	NM_00045 4		GLY93ALA
Superoxide Dismutase 1/SOD1 (soluble)	147450	NM_00045 4		GLU100GLY
Superoxide Dismutase	147450	NM_00045		LEU106VAL

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1/SOD1 (soluble)	4		
Superoxide Dismutase	147450	NM_00045	ILE113THR
1/SOD1 (soluble)	4		
Superoxide Dismutase	147450	NM_00045	ALA4VAL
1/SOD1 (soluble)	4		
Superoxide Dismutase	147450	NM_00045	HIS46ARG
1/SOD1 (soluble)	4		
Superoxide Dismutase	147450	NM_00045	ALA4THR
1/SOD1 (soluble)	4		
Superoxide Dismutase	147450	NM_00045	ASP90ALA
1/SOD1 (soluble)	4		
Superoxide Dismutase	147450	NM_00045	ILE104THE
1/SOD1 (soluble)	4		
Superoxide Dismutase	147450	NM_00045	LEU144SER
1/SOD1 (soluble)	4		
Superoxide Dismutase	147450	NM_00045	ALA145THR
1/SOD1 (soluble)	4		
Superoxide Dismutase	147450	NM_00045	
1/SOD1 (soluble)	4		
Superoxide Dismutase	147450	NM_00045	CYS6PHE
1/SOD1 (soluble)	4		
Superoxide Dismutase	147450	NM_00045	THR151ILE
1/SOD1 (soluble)	4		
Superoxide Dismutase	147450	NM_00045	GLU21LYS
1/SOD1 (soluble)	4		
Superoxide Dismutase	147450	NM_00045	SER134ASN
1/SOD1 (soluble)	4		
Superoxide Dismutase	147450	NM_00045	LEU84VAL
1/SOD1 (soluble)	4		
Superoxide Dismutase	147450	NM_00045	GLY16SER
1/SOD1 (soluble)	4		

T-G, -10, 9-BP INS

Superoxide Dismutase 1/SOD1 (soluble)	147450	NM_00045 4	LEU126TER
Superoxide Dismutase 1/SOD1 (soluble)	147450	NM_00045 4	VS4AS, A-G, -I1
Superoxide Dismutase 1/SOD1 (soluble)	147450	NM_00045 4	GLY72SER
Superoxide Dismutase 1/SOD1 (soluble)	147450	NM_00045 4	Val7-->Glu
Superoxide Dismutase 2/SOD2 (mitochondrial)	147460	X65965	ALA16VAL
Superoxide Dismutase 3/SOD3 (extracellular)	185490	NM_00310 2	ARG213GLY
Superoxide Dismutase 3/SOD3 (extracellular)	185490	NM_00310 2	A241G
Superoxide Dismutase 3/SOD3 (extracellular)	185490	NM_00310 2	C280T
Thiopurine methyltransferase (6- mercaptopurine detoxification)	187680	U12387	ALA80PRO
Thiopurine methyltransferase (6- mercaptopurine detoxification)	187680	U12387	ALA154THR
Thiopurine methyltransferase (6- mercaptopurine detoxification)	187680	U12387	TYR240CYS
Thiopurine methyltransferase (6- mercaptopurine detoxification)	187680	U12387	IVS9AS, G-A, -I

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mercaptapurine detoxification)	187680	U12387	ALA154THR
Thiopurine			
methy/transferase (6- mercaptapurine detoxification)	187680	U12387	TYR240CYS
Thiopurine			
methy/transferase (6- mercaptapurine detoxification)	187680	U12387	ARG215HIS
Thiopurine			
methy/transferase (6- mercaptapurine detoxification)	187680	U12387	G460 to A
Thiopurine			
methy/transferase (6- mercaptapurine detoxification)	187680	U12387	A719 to G
Thiopurine			
methy/transferase (6- mercaptapurine detoxification)	187680	U12387	VNTR promoter
Thiopurine			
methy/transferase (6- mercaptapurine detoxification)	187680	U12387	G644A
Thiopurine			
methy/transferase (6- mercaptapurine detoxification)	187680	U12387	G238C
Thiopurine			

methytransferase (6- mercaptapurine detoxification)	187680	U12387	T681G	
Thiopurine methytransferase (6- mercaptapurine detoxification)	187680	U12387	C-->T at nucleotide - 178	
Thiopurine methytransferase (6- mercaptapurine detoxification)	187680	U12387	T-->G681	
TRANSCRIPTION FACTOR P65	164014	L19067		494, Glu-Asp
UDP glycosyltransferase 1/UGT1	191740	NM_00107 2	13-BP DEL	
UDP glycosyltransferase 1/UGT1	191740	NM_00107 2		SER-PHE
UDP glycosyltransferase 1/UGT1	191740	NM_00107 2		GLN331TER
UDP glycosyltransferase 1/UGT1	191740	NM_00107 2		ARG341TER
UDP glycosyltransferase	191740	NM_00107 2		GLN331ARG

1/UGT1	191740	NM_00107	PHE170DEL
UDP		2	
glycosyltransferase			
1/UGT1	191740	NM_00107	SER376PHE
UDP		2	
glycosyltransferase			
1/UGT1	191740	NM_00107	GLY309GLU
UDP		2	
glycosyltransferase			
1/UGT1	191740	NM_00107	CYS-TER
UDP		2	
glycosyltransferase			
1/UGT1	191740	NM_00107	PRO229GLN
UDP		2	
glycosyltransferase			
1/UGT1	191740	NM_00107	2-BP INS, TA,
UDP		2	TATAA ELEMENT
glycosyltransferase			
1/UGT1	191740	NM_00107	1-BP INS, 470T
UDP		2	
glycosyltransferase			
1/UGT1	191740	NM_00107	IVS1, G-C, +1
UDP		2	
glycosyltransferase			
1/UGT1	191740	NM_00107	145C-T
UDP		2	
glycosyltransferase			
1/UGT1	191740	NM_00107	IVS3, A-G, -2
UDP		2	
glycosyltransferase			
1/UGT1			

UDP glycosyltransferase 8/UGT8	601291	U30930	none found	
UDP glycosyltransferase family 2, member B10/UGT2B10	600070	NM_00107 5	none found	
UDP glycosyltransferase family 2, member B15/UGT2B15	600069	U06641	asp851yr	
UDP glycosyltransferase family 2, member B17/UGT2B17	601903	NM_00107 7	none found	
UDP glycosyltransferase family 2, member B4/UGT2B4	600067	NM_00107 3	asp458glu	
UDP glycosyltransferase family 2, member B4/UGT2B4	600067	NM_00107 3	leu109phe	
UDP glycosyltransferase family 2, member B4/UGT2B4	600067	NM_00107 3	leu396phe	
UDP glycosyltransferase family 2, member B7/UGT2B7	600068	NM_00107 4	none found	

UDP-glucuronosyltransferase	21880	AJ005162	none found
Vesicular acetylcholine transporter	600336	NM_003055	none found
Vesicular Amine Transporter 1; VAT1	193002	*****	none found
Vesicular Amine Transporter 2; VAT2	193001	L09118	TaqI XX
Table 21. Identified Variances in Genes or Related Pathways involved in Inflammation and Immune Disease			
3,5 cyclic nucleotide phosphodiesterase (HSPDE1A3A)	171890	U40370	none found
activated leucocyte cell adhesion molecule/CD6 ligand/ALCAM	601662	L38608	none found
alpha-2-macroglobulin	103950	M11313	VAL1000ILE
alpha-2-macroglobulin	103950	M11313	CYS972TYR
alpha-2-macroglobulin	103950	M11313	deletion of the intron
alpha-2-macroglobulin	103950	M11313	ARG681HIS
alpha-2-macroglobulin	103950	M11313	EX18DEL
alpha-2-macroglobulin	103950	M11313	5-BP DEL
alpha-2-macroglobulin	103950	M11313	intronic

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alpha-2-macroglobulin	103950	M11313	polymorphism EcoRI	ILE333VAL
antigen peptide transporter 1/MHC 1/TAP1	170260	X57522		
antigen peptide transporter 1/MHC 1/TAP1	170260	X57522		ASP637GLY
antigen peptide transporter 1/MHC 1/TAP1	170260	X57522		ARG659GLN
antigen peptide transporter 1/MHC 1/TAP1	170260	X57522	518 (GTC-->ATC)	Val-->Ile
antigen peptide transporter 1/MHC 1/TAP1	170260	X57522	G-->T substitution in the promoter region	
antigen peptide transporter 1/MHC 1/TAP1	170260	X57522	10-bp insert in intron 9	
antigen peptide transporter 1/MHC 1/TAP1	170260	X57522	G-->T 80bp 3' of termination codon	
antigen peptide transporter 2/MHC 2/TAP2	170261	Z22935		Ala665Thr
antigen peptide transporter 2/MHC 2/TAP2	170261	Z22935		Gln687Stop
antigen peptide transporter 2/MHC	170261	Z22935		ILE379VAL

2/TAP2	147678	X65019	none found	
apoptosis-related cystein protease 1/interleukin 1-beta converting enzyme/ICE/caspase 1/CASP1				
beta-1-adrenergic receptor; Adrb1	109630	J03019	C1165G ARG389GLY	
beta-1-adrenergic receptor; Adrb1	109630	J03019	Bgl I.	
Beta-2-Adrenergic Receptor; Adrb2	109690	M15169	val 34 met	
Beta-2-Adrenergic Receptor; Adrb2	109690	M15169	A-->G -1343	
Beta-2-Adrenergic Receptor; Adrb2	109690	M15169	C-->G -468	
Beta-2-Adrenergic Receptor; Adrb2	109690	M15169	G-->A -1023	
Beta-2-Adrenergic Receptor; Adrb2	109690	M15169	G-->A -654	
Beta-2-Adrenergic Receptor; Adrb2	109690	M15169	T-->A -1429	
Beta-2-Adrenergic Receptor; Adrb2	109690	M15169	T-->C -367	
Beta-2-Adrenergic Receptor; Adrb2	109690	M15169	Fnu4HI	
Beta-2-Adrenergic Receptor; Adrb2	109690	M15169	T-->C -20	
Beta-2-Adrenergic Receptor; Adrb2	109690	M15169	T-->C -47	

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Beta-3-Adrenergic Receptor; Adrb3	109691	X70811	TRP64ARG
Beta-3-Adrenergic Receptor; Adrb3	109691	X70811	intron 1 g1856t
Beta-Adrenergic Receptor Kinase 2; Adrbk2	109636	X69117	none found
bradykinin receptor B1/BDKRB1 G	600337	U12512	9-base pair deletion
protein-coupled bradykinin receptor B1/BDKRB1 G	600337	U12512	A1098-->G
protein-coupled bradykinin receptor B1/BDKRB1 G	600337	U12512	C181-->T
protein-coupled bradykinin receptor B1/BDKRB1 G	600337	U12512	G-699-->C
protein-coupled bradykinin receptor B2/BDKRB2 G	113503	X86164	-845C/T
protein-coupled bradykinin receptor B2/BDKRB2 G	113503	X86165	-704C/T
protein-coupled bradykinin receptor B2/BDKRB2 G	113503	X86166	-649insG
protein-coupled bradykinin receptor B2/BDKRB2 G	113503	X86167	-640T/C

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bradykinin receptor B2/BDKRB2 G	113503	X86168	-536C/T	
protein-coupled bradykinin receptor B2/BDKRB2 G	113503	X86169	-412C/G	
protein-coupled bradykinin receptor B2/BDKRB2 G	113503	X86170	-143C/T	
protein-coupled bradykinin receptor B2/BDKRB2 G	113503	X86171	-78C/T	
protein-coupled bradykinin receptor B2/BDKRB2 G	113503	X86172		T21M
protein-coupled bradykinin receptor B2/BDKRB2 G	113503	X86173	9 bp de (-)21-29	
protein-coupled bradykinin receptor B2/BDKRB2 G	113503	X86174	C>T promoter 54	
protein-coupled bradykinin receptor B2/BDKRB2 G	113503	X86175	tandem repeat near promoter	
protein-coupled bradykinin receptor B2/BDKRB2 G	113503	X86176		R14C
protein-coupled bradykinin receptor B2/BDKRB2 G	113503	X86177	repeat 3'UTR	
protein-coupled Ca Channel alpha 1a	601011	AF004884		ARG192GLN

(alt. splice) L-Type Ca Channel alpha	601011	AF004884	THR666MET
(alt. splice) L-Type Ca Channel alpha	601011	AF004884	VAL714ALA
(alt. splice) L-Type Ca Channel alpha	601011	AF004884	ILE1811LEU
(alt. splice) L-Type Ca Channel alpha	601011	AF004884	1-BP DEL, 4073C frameshift
(alt. splice) L-Type Ca Channel alpha	601011	AF004884	G-to-A first nucleotide of intron 24 (CAG)n
Ca Channel alpha (alt. splice) L-Type	601011	AF004884	GLY293ARG
Ca Channel alpha (alt. splice) L-Type	601011	AF004884	ASP715GLU
Ca Channel alpha (alt. splice) L-Type	601011	AF004884	C4914T premature stop
Ca Channel gamma L-Type	114209	L07738	none found
Ca ²⁺ -dependent phospholipase A2	601192	U03090	none found
CD3E antigen, epsilon polypeptide (TiT3 complex)	186830	X03884	T-to-C splice change
CD3E antigen, epsilon polypeptide (TiT3 complex)	186830	X03884	TRP59TER
CD3E antigen, epsilon	186830	X03884	TaqI

polypeptide (TiT3 complex)	186740	X04145	METIVAL	
CD3G antigen, gamma polypeptide (TiT3 complex)	186740	X04145	17-BP DEL	
CD3G antigen, gamma polypeptide (TiT3 complex)	186740	X04145	MspI	
Component C1S component precursor (C1 esterase)	120580	J04080	4-BP DEL	
Cyclooxygenase 1 COX1	176805	M59979	none found	
Cyclooxygenase 2 COX2	600262	M90100	none found	
H.sapiens ACTH-R gene for adrenocorticotrophic hormone receptor	None	X65633	none found	
Histamine receptor H1	600167	AF026261	none found	
Histamine receptor H2	142703	M64799	A649G	
Histamine receptor H3			none found	
Human DP prostanoicd receptor (PTGDR) gene, 5 region and partial cds	None	U31332	none found	
Human IP gene for prostacyclin receptor,	600022	D38128	none found	

Human leukotriene-C4 synthase mRNA, complete cds	246530	U11552	promoter polymorphism
Human mRNA for prostacyclin synthase, complete cds	601699	D38145	none found
Human prostaglandin receptor ep1 subtype mRNA, complete cds	176802	L22647	none found
Intercellular adhesion molecule 1	147840	M24283	K/E 469
Intercellular adhesion molecule 1	147840	M24283	Dinucleotide repeat 3'
Intercellular adhesion molecule 2	146630	X15606	none found
Intercellular adhesion molecule 3	146631	X69819	LYS29MET
interferon-gamma receptor 2/IFNGR2	147569	U05875	Gln64Arg
interferon-gamma receptor 2/IFNGR2	147569		2-BP DEL, AG, NT278-279
interferon-gamma receptor 1/IFNGR1	107470	J03143	395C-A SER-TER
interferon-gamma receptor 1/IFNGR1	107470		1-BP DEL frameshift
interferon-gamma receptor 1/IFNGR1	107470		ILE87THR
interferon-gamma receptor 1/IFNGR1	107470		4-BP INS, 107TTAC
interferon-gamma	107470		G-A, +1

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receptor 1/IFNGRI	107470	4-BP DEL, NT818	Val14Met
interferon-gamma receptor 1/IFNGRI	107470		
interferon-gamma receptor 1/IFNGRI	107470		TaqI
interferon-gamma receptor 1/IFNGRI	147720		TaqI
interleukin 1 beta (IL1b)	147720	+5887 C --> T	
interleukin 1 beta (IL1b)	147720	exon 5 (position +3953)	
interleukin 1 beta (IL1b)	147720	position -511	
interleukin 1 beta (IL1b)	147720		Asp106Asn
Interleukin 1 receptor antagonist	147679	86-bp tandem repeat	
Kallikrein Inhibitor	147935	none found	
Kallikrein KLK1	147910	A1166-->C	
Kallikrein KLK1	147910	TaqI	
Kallikrein KLK2	147960	C to T at base 792	
L-Type Ca Channel alpha 2/delta	114204	none found	
L-Type Ca Channel alpha1d	114206	none found	
L-type voltage dependent calcium channel alpha 1C subunit/CACNA1C	114205	none found	

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L-type voltage dependent calcium channel alpha 1S subunit/CACNA1S	114208	L33798	ARG1086HIS
L-type voltage dependent calcium channel alpha 1S subunit/CACNA1S	114208	L33798	ARG1239GLY
L-type voltage dependent calcium channel alpha 1S subunit/CACNA1S	114208	L33798	ARG1239HIS
L-type voltage dependent calcium channel alpha 1S subunit/CACNA1S	114208	L33798	ARG528HIS
Leukocyte integrin alpha-4	192975	L12002	none found
Leukocyte integrin alpha-d	602453	U40274	none found
Leukocyte integrin alpha-l	153370	Y00796	none found
Leukocyte integrin alpha-m	120980	J04145	none found
Leukocyte integrin alpha-x	151510	M81695	none found
Leukocyte integrin beta-1	135630	U28252	none found
Leukocyte integrin beta-2	600065	M15395	ARG593CYS
Leukocyte integrin	600065	M15395	LYS196THR

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Leukocyte integrin beta-2	600065	M15395	LEU149PRO
Leukocyte integrin beta-2	600065	M15395	GLY169ARG
Leukocyte integrin beta-2	600065	M15395	ATG-to-AAG initiation codon
Leukocyte integrin beta-2	600065	M15395	ARG586TRP
Leukocyte integrin beta-2	600065	M15395	12-bp insertion pro-ser-ser-gln
Leukocyte integrin beta-2	600065	M15395	ASN351SER
Leukocyte integrin beta-2	600065	M15395	PRO178LEU
Leukocyte integrin beta-2	600065	M15395	ASP128ASN
Leukocyte integrin beta-2	600065	M15395	G-A, splice/donor site
Leukocyte integrin beta-2	600065	M15395	GLY284SER
Leukocyte integrin beta-2	600065	M15395	SER138PRO
Leukocyte integrin beta-2	600065	M15395	GLY273ARG
Leukocyte integrin beta-2	600065	M15395	S138P
Leukocyte integrin beta-2	173470	M35999	ARG214GLN
Leukocyte integrin beta-3	173470	M35999	ASP119TYR

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Leukocyte integrin beta-3	173470	M35999	ARG214TRP
Leukocyte integrin beta-3	173470	M35999	SER752PRO
Leukocyte integrin beta-3	173470	M35999	ARG143GLN
Leukocyte integrin beta-3	173470	M35999	LEU333PRO
Leukocyte integrin beta-3	173470	M35999	PRO407ALA
Leukocyte integrin beta-3	173470	M35999	G-T, EXiDEL
Leukocyte integrin beta-3	173470	M35999	ARG489GLN
Leukocyte integrin beta-3	173470	M35999	CYS374TYR
Leukocyte integrin beta-3	173470	M35999	11.2-KB DEL
Leukocyte integrin beta-3	173470	M35999	ARG724TER
Leukocyte integrin beta-3	173470	M35999	GLU616TER
Leukocyte integrin beta-4	147557	X51841	1-BP INS, 3801T
Leukocyte integrin beta-4	147557	X51841	1-BP DEL, 1150G
Leukocyte integrin beta-4	147557	X51841	LEU156PRO
Leukocyte integrin beta-4	147557	X51841	ARG554TER
Leukocyte integrin beta-4	147557	X51841	CYS61TYR

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beta-4 Leukocyte integrin	147557	X51841	CYS562ARG
beta-4 Leukocyte integrin	147557	X51841	IVS30DS, G-A, +1
beta-4 Leukocyte integrin	147557	X51841	TRP1478TER
beta-4 Leukocyte integrin	147557	X51841	CYS38ARG
beta-4 Leukocyte integrin	147557	X51841	1-BP DEL, 4776G
beta-4 Leukocyte integrin	147557	X51841	3434delT
beta-4 Leukocyte integrin	147557	X51841	8-bp deletion
beta-4 Leukocyte integrin	147559	M68892	none found
beta-7 Leukocyte integrin	151570	J03459	none found
Leukotriene A4 hydrolase			none found
Leukotriene C4 receptor			none found
Leukotriene D4/E4 receptor			none found
lipocortin 1/annexin 1	151690	X05908	none found
lipocortin 2/annexin 2	151740	D00017	none found
lipocortin 3/annexin 3	106490	M20560	BglII
lipocortin 3/annexin 3	106490	M20560	SalI
lipocortin 3/annexin 3	106490	M20560	tandem repeat
Lipoxygenases: 12- lipoxygenase (platelet)	152391	M62982	TAAA none found

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Lipoxygenases: 5-lipoxygenase (leukocytes)	152390	J03571	none found
lymphotoxin beta receptor (TNFR superfamily, member 3/LTBR)	600979	L04270	none found
N-acetylamino acid aminohydrolase	104620	L07548	none found
P2Y7 purinoceptor/leukotriene B4 receptor/G protein-coupled	601531	D89078	none found
Phospholipase A-2 (PLA-2) lung	172410	M21054	none found
Phospholipase C beta-3	600230	Z26649	none found
Phospholipase C delta-1	602142	U09117	none found
Phospholipase C epsilon	600597	D42108	none found
Phospholipase C gamma-1	172420	M34667	none found
Phospholipase C gamma-2	600220	M37238	none found
Phospholipase C, beta 4	600810	L41349	none found
Platelet-activating factor receptor	173393	M76674	none found
Prostaglandin 15-OH dehydrogenase (PGDH)	601688	J05594	none found

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Prostaglandin E receptor 2 (subtype EP2), 53kD	601586	L28175	none found	
Prostaglandin E receptor 3 (subtype EP3) {alternative products}	176806	X83861	none found	
PROSTAGLANDIN E2 RECEPTOR, EP2 SUBTYPE	176804	U19487	none found	
PROSTAGLANDIN F RECEPTOR	600563	L24470	none found	
PROSTAGLANDIN F2 ALPHA RECEPTOR		U26664	none found	
prostaglandin transporter hPGT	601460	U70867	none found	
recombination activating gene 1/RAG1	179615	M29474		GLU722LYS
recombination activating gene 1/RAG1	179615	M29474		GLU774TER
recombination activating gene 1/RAG1	179615	M29474		TYR938TER
recombination activating gene 1/RAG1	179615	M29474		ALA156VAL
recombination activating gene	179615	M29474		ARG561HIS

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1/RAG1 recombination activating gene 1/RAG1	179615	M29474	ARG396CYS
recombination activating gene 1/RAG1	179615	M29474	TYR912CYS
recombination activating gene 1/RAG1	179615	M29474	ARG396HIS
recombination activating gene 1/RAG1	179615	M29474	ASP429GLY
recombination activating gene 1/RAG1	179615	M29474	ARG561CYS
recombination activating gene 1/RAG1	179615	M29474	ARG737HIS
recombination activating gene 1/RAG1	179615	M29474	13-BP DEL, NT1723
recombination activating gene 1/RAG1	179615	M29474	2-BP DEL, NT368
recombination activating gene 2/RAG2	179616		CYS476TYR
recombination activating gene 2/RAG2	179616		ARG220GLN

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recombination activating gene 2/RAG2	179616			CYS41TRP	
recombination activating gene 2/RAG2	179616			MET285ARG	
regulator of G-protein signalling 1/RGS1	600323	X73427	none found		
Retinoic acid receptor, alpha/RARA	180240	X06538	7-base deletion frameshift		
Retinoic acid receptor, alpha/RARA	180240	X06538		Arg272Gln	
Retinoic acid receptor, alpha/RARA	180240	X06538		Met297Leu	
Retinoic acid receptor, alpha/RARA	180240	X06538	codon 411 C to T		
Retinoic acid receptor, beta/RARB	180220	X07282	none found		
Retinoic acid receptor, gamma/RARG	180190	M24857	none found		
serotonin 5-HT receptors 5-HT3, gated ion channel	182139	D49394	none found		
signaling lymphocytic activation molecule/SLAM	603492	U33017	none found		
small inducible cytokine subfamily A (Cys-Cys), member 2/monocyte chemotactic protein	158105	M28226	-2518 (G or A)		

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1/MCP1/SCYA2 small inducible cytokine subfamily A (Cys-Cys), member 2/monocyte chemotactic protein 1/MCP1/SCYA2 small inducible cytokine subfamily A (Cys-Cys), member 3/macrophage inflammatory protein 1A/MIP1A/SCYA3 Solute carrier family 4, anion exchanger, member 1 (MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE) Solute carrier family 4, anion exchanger, member 1 (MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE) Solute carrier family 4, anion exchanger,	158105	M28226	-2076 (A or T)
	182283	M25315	none found
	109270	M27819	LYS56GLU
	109270	M27819	24-BP DEL CODONS 400-408
	109270	M27819	PRO327ARG

member 1 (MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)	109270	M27819	GLU40LYS
Solute carrier family 4, anion exchanger, member 1			
(MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)			
Solute carrier family 4, anion exchanger, member 1	109270	M27819	10-BP DUP
(MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)			
Solute carrier family 4, anion exchanger, member 1	109270	M27819	GLU658LYS
(MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)			
Solute carrier family 4, anion exchanger, member 1	109270	M27819	GLY771ASP
(MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)			
Solute carrier family 4, anion exchanger, member 1			

anion exchanger, member 1 (MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)	109270	M27819	GLN330TER
Solute carrier family 4, anion exchanger, member 1 (MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)	109270	M27819	ARG150TER
Solute carrier family 4, anion exchanger, member 1 (MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)	109270	M27819	89G-A
Solute carrier family 4, anion exchanger, member 1 (MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)	109270	M27819	

Solute carrier family 4, anion exchanger, member 1 (MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)	109270	M27819	VAL557MET
Solute carrier family 4, anion exchanger, member 1 (MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)	109270	M27819	ARG589HIS
Solute carrier family 4, anion exchanger, member 1 (MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)	109270	M27819	ARG589CYS
Solute carrier family 4, anion exchanger, member 1 (MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)	109270	M27819	SER613PHE

THE MEMBRANE) Solute carrier family 4, anion exchanger, member 1 (MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)	109270	M27819	ARG589SER
Solute carrier family 4, anion exchanger, member 1 (MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)	109270	M27819	GLY701ASP
Solute carrier family 4, anion exchanger, member 1 (MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)	109270	M27819	PRO854LEU
Solute carrier family 4, anion exchanger, member 1 (MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)	109270	M27819	GLY130ARG

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ANIONS ACROSS THE MEMBRANE)	109270	M27819	THR837ALA
Solute carrier family 4, anion exchanger, member 1			
(MEDIATES EXCHANGE OF INORGANIC ANIONS ACROSS THE MEMBRANE)			
T cell receptor- associated protein tyrosine kinase ZAP- 70/ZAP70	176947	L05148	GG-AG, -11
T cell receptor- associated protein tyrosine kinase ZAP- 70/ZAP70	176947	L05148	G-A, -9
T cell receptor- associated protein tyrosine kinase ZAP- 70/ZAP70	176947	L05148	SER518ARG
T cell receptor- associated protein tyrosine kinase ZAP- 70/ZAP70	176947	L05148	13-BP DEL frameshift
Thromboxane A2 TP receptor, platelet and non-platelet	188070	U27325	ARG60LEU
Thromboxane synthase transforming growth	274180 190181	M80646 L11695	(CA)n intron 9 S387Y

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factor, beta receptor I (activin A receptor type II-like kinase, 53kD)/TGFBRI	190182	M85079	2-BP INS frameshift
transforming growth factor, beta receptor II (70-80kD)/TGFB2	190182	M85079	THR315MET
transforming growth factor, beta receptor II (70-80kD)/TGFB2	190182	M85079	GG to TT Stop codon
transforming growth factor, beta receptor II (70-80kD)/TGFB2	190182	M85079	a7g intron 2
transforming growth factor, beta receptor II (70-80kD)/TGFB2	190182	M85079	a-4t intron 3
transforming growth factor, beta receptor II (70-80kD)/TGFB2	190182	M85079	codon 128
transforming growth factor, beta receptor II (70-80kD)/TGFB2	190182	M85079	ACA to GCA Thr to Ala
transforming growth factor, beta receptor II (70-80kD)/TGFB2	190182	M85079	base in the polyadenine tract of exon 3
transforming growth factor, beta receptor III (betaglycan,	600742	L07594	none found

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300kD)/TGFB β 3				
tumor necrosis factor alpha (TNFa)	191160	X01394	C-850T	
tumor necrosis factor alpha (TNFa)	191160	X01394	C-ins 5'UTR of exon 1	
tumor necrosis factor alpha (TNFa)	191160	X01394	G -238 A	
tumor necrosis factor alpha (TNFa)	191160	X01394	G -376 A	
tumor necrosis factor alpha (TNFa)	191160	X01394	-1,031 T-->C	
tumor necrosis factor alpha (TNFa)	191160	X01394	-863 C-->A	
tumor necrosis factor alpha (TNFa)	191160	X01394	-308 G/A	
tumor necrosis factor alpha (TNFa)	191160	X01394		ARG32TRP
tumor necrosis factor alpha (TNFa)	191160	X01394		LEU29SER
tumor necrosis factor alpha (TNFa)	191160	X01394	G-376A	
tumor necrosis factor alpha (TNFa)	191160	X01394	NcoI	
tumor necrosis factor alpha (TNFa)	191160	X01394	C to T, -857T	
TUMOR NECROSIS FACTOR RECEPTOR	191190	M58286		CYS33TYR
1 PRECURSOR				
TUMOR NECROSIS FACTOR RECEPTOR	191190	M58286		THR50MET
1 PRECURSOR				

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TUMOR NECROSIS FACTOR RECEPTOR 1 PRECURSOR	191190	M58286	CYS30ARG
TUMOR NECROSIS FACTOR RECEPTOR 1 PRECURSOR	191190	M58286	CYS52PHE
TUMOR NECROSIS FACTOR RECEPTOR 1 PRECURSOR	191190	M58286	CYS88ARG
TUMOR NECROSIS FACTOR RECEPTOR 1 PRECURSOR	191190	M58286	CYS88TYR
Tumor necrosis factor receptor 2 (75kD)	191191	M32315	M196R
tumor necrosis factor type 1 receptor associated protein (TRAP1)	None	U12595	none found
tumor necrosis factor type 2 receptor associated protein (TRAP3)	601895	U12597	none found
Vascular cell adhesion molecule 1	192225	M60335	none found
vitamin D (1,25- dihydroxyvitamin D3) receptor/VDR	601769	J03258	GLY30ASP
vitamin D (1,25- dihydroxyvitamin D3) receptor/VDR	601769	J03258	ARG-GLY
vitamin D (1,25- dihydroxyvitamin D3) receptor/VDR	601769	J03258	TYR292TER

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1,25-dihydroxyvitamin D3) receptor/VDR	601769	J03258	ARG77GLN
1,25-dihydroxyvitamin D3) receptor/VDR	601769	J03258	ARG47GLN
1,25-dihydroxyvitamin D3) receptor/VDR	601769	J03258	GLN149TER
1,25-dihydroxyvitamin D3) receptor/VDR	601769	J03258	ARG271LEU
1,25-dihydroxyvitamin D3) receptor/VDR	601769	J03258	GLY46ASP
1,25-dihydroxyvitamin D3) receptor/VDR	601769	J03258	HIS305GLN
1,25-dihydroxyvitamin D3) receptor/VDR	601769	J03258	ILE314SER
1,25-dihydroxyvitamin D3) receptor/VDR	601769	J03258	ARG391CYS
1,25-dihydroxyvitamin D3) receptor/VDR	601769	J03258	ARG30TER
1,25-dihydroxyvitamin D3) receptor/VDR	601769	J03258	BsmI

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receptor/VDR	601769	J03258	ATG to ACG initiation codon
vitamin D (1,25-dihydroxyvitamin D3) receptor/VDR	601769	J03258	Apa I
vitamin D (1,25-dihydroxyvitamin D3) receptor/VDR	601769	J03258	Taq I
vitamin D (1,25-dihydroxyvitamin D3) receptor/VDR	601769	J03258	codon 79 silent
vitamin D (1,25-dihydroxyvitamin D3) receptor/VDR	601769	J03258	base change in intron 3
vitamin D (1,25-dihydroxyvitamin D3) receptor/VDR	601769	J03258	EcoRV xx
2,3-cyclic nucleotide 3 phosphodiesterase	M19650	123830	none found
3beta hydroxysteroid dehydrogenase	M27137	109715	none found
a-glucosidase	Y00839	232300	EX18DEL

Table 22. Identified Variances in Genes or Related Pathways involved in Endocrine and Metabolic Disease

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a-glucosidase	Y00839	232300	1-BP DEL	frameshift
a-glucosidase	Y00839	232300	T-G, -13 intron 1	
a-glucosidase	Y00839	232300		ARG725TRP
a-glucosidase	Y00839	232300		PRO545LEU
a-glucosidase	Y00839	232300		SER529VAL
a-glucosidase	Y00839	232300		GLY643ARG
a-glucosidase	Y00839	232300		GLU521LYS
a-glucosidase	Y00839	232300		GLU689LYS
a-glucosidase	Y00839	232300		ARG854TER
a-glucosidase	Y00839	232300		LEU299ARG
a-glucosidase	Y00839	232300		LYS903DEL
a-glucosidase	Y00839	232300		MET318THR
a-glucosidase	Y00839	232300		ASP91ASN
a-glucosidase	Y00839	232300		ASP645GLU
a-glucosidase AB	D42041	None	none found	
ACAT1	D90228	203750	1-BP INS, 1083A	
ACAT1	D90228	203750	1163 + 2	
ACAT1	D90228	203750	4-BP INS	
ACAT1	D90228	203750	828 + 1	
ACAT1	D90228	203750	IVS10, A-C, -2	
ACAT1	D90228	203750	IVS10, G-C, -1	
ACAT1	D90228	203750	IVS8, G-T, +1	
ACAT1	D90228	203750		ALA347THR
ACAT1	D90228	203750		GLY150ARG
ACAT1	D90228	203750		MET1LYS
ACAT1	D90228	203750		GLY379VAL
ACAT1	D90228	203750		GLN272TER
ACAT1	D90228	203750		GLU345DEL
ACAT1	D90228	203750		ASN93SER
ACAT1	D90228	203750		ILE312THR
ACAT1	D90228	203750		ALA333PRO

ACAT1	D90228	203750	N158D
ACAT2	S70154	100678	
ACAT2	S70154	100678	
ACAT2	S70154	100678	
ACAT2	S70154	100678	
ACAT2	S70154	100678	N158D Q272X
Adrenocorticotrophic hormone (ACTH)	M28636	176830	
Adrenocorticotrophic hormone (ACTH)	M28636	176830	N158D Q272X
Adrenocorticotrophic hormone (ACTH)	M28636	176830	
aldose reductase	M34720	103880	N158D Q272X
Alpha Amylase 2A; pancreatic	M28443	104650	
androgen receptor	M20132	313700	N158D Q272X
androgen receptor	M20132	313700	
androgen receptor	M20132	313700	
androgen receptor	M20132	313700	
androgen receptor	M20132	313700	
androgen receptor	M20132	313700	
androgen receptor	M20132	313700	
androgen receptor	M20132	313700	
androgen receptor	M20132	313700	
androgen receptor	M20132	313700	
androgen receptor	M20132	313700	
androgen receptor	M20132	313700	
androgen receptor	M20132	313700	
androgen receptor	M20132	313700	
androgen receptor	M20132	313700	

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androgen receptor	M20132	313700	Insert of 69 nucleotides. MaeIII PARTIAL DEL Stu I
androgen receptor	M20132	313700	VAL730MET
androgen receptor	M20132	313700	ALA721THR
androgen receptor	M20132	313700	GLN902ARG
androgen receptor	M20132	313700	HIS874TYR
androgen receptor	M20132	313700	SER647ASN
androgen receptor	M20132	313700	THR877SER
androgen receptor	M20132	313700	ARG607GLN
androgen receptor	M20132	313700	VAL865LEU
androgen receptor	M20132	313700	VAL865MET
androgen receptor	M20132	313700	LYS588TER
androgen receptor	M20132	313700	CYS579PHE
androgen receptor	M20132	313700	PHE582TYR
androgen receptor	M20132	313700	pro892ser
androgen receptor	M20132	313700	PRO546SER
androgen receptor	M20132	313700	ILE869MET
androgen receptor	M20132	313700	GLU2LYS
androgen receptor	M20132	313700	ARG839CYS
androgen receptor	M20132	313700	ARG839HIS
androgen receptor	M20132	313700	GLN60TER
androgen receptor	M20132	313700	TRP794TER
androgen receptor	M20132	313700	LEU172TER
androgen receptor	M20132	313700	LEU707ARG
androgen receptor	M20132	313700	MET786VAL
androgen receptor	M20132	313700	TYR761CYS
androgen receptor	M20132	313700	ARG772CYS
androgen receptor	M20132	313700	598 or 599 ter

androgen receptor	M20132	313700	gly743val
androgen receptor	M20132	313700	Gln798Glu
androgen receptor	M20132	313700	arg726leu
androgen receptor	M20132	313700	LEU676PRO
androgen receptor	M20132	313700	ARG608LYS
androgen receptor	M20132	313700	val 581 phe
androgen receptor	M20132	313700	G214R
androgen receptor	M20132	313700	THR877ALA
androgen receptor	M20132	313700	Arg615His
androgen receptor	M20132	313700	Arg752Gln
androgen receptor	M20132	313700	arg840his
androgen receptor	M20132	313700	ALA771THR
androgen receptor	M20132	313700	LYS882TER
androgen receptor	M20132	313700	ARG846HIS
androgen receptor	M20132	313700	ARG773HIS
androgen receptor	M20132	313700	TRP717TER
androgen receptor	M20132	313700	ARG773CYS
androgen receptor	M20132	313700	VAL866MET
androgen receptor	M20132	313700	ARG855HIS
androgen receptor	M20132	313700	MET780ILE
Arginine Vasopressin	AF030625	600821	none found
Receptor 1A/AVPR1A			
Arginine Vasopressin	AF030512	600264	none found
Receptor 1B/AVPR1B			
Arginine vasopressin	AF030626	304800	1-BP DEL
receptor 2			
Arginine vasopressin	AF030626	304800	1-BP DEL, 102G
receptor 2			
Arginine vasopressin	AF030626	304800	1-BP INS frameshift
receptor 2			
Arginine vasopressin	AF030626	304800	1-BP INS 804 frameshift

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Arginine vasopressin receptor 2	AF030626	304800	ARG337TER
Arginine vasopressin receptor 2	AF030626	304800	G107E
Arginine vasopressin receptor 2	AF030626	304800	L43P
Arginine vasopressin receptor 2	AF030626	304800	W193X
Arginine vasopressin receptor 2	AF030626	304800	ARG181CYS
Arginine vasopressin receptor 2	AF030626	304800	R137H
ATP-sensitive inwardly rectifying K- channel	U24660	600877	none found
Beta-3-Adrenergic Receptor; Adrb3	X70811	109691	intron 1 g1856t
Beta-3-Adrenergic Receptor; Adrb3	X70811	109691	TRP64ARG
BONE MORPHOGENETIC PROTEIN RECEPTOR, TYPE IB; BMPRI B		603248	none found
Calcitonin Receptor	U26553	114131	PRO463LEU
Calcitonin Receptor	U26553	114131	pro447leu
Calcitonin Related Peptide Receptor	U17473	114190	none found
Calcitonin Related Polypeptide Alpha	M26095	114130	1-BP INS, IVS4
Calcium-activated	U02632	600150	none found

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potassium channel				
calpain, large polypeptide L3/CAPN3	NM_000070	114240		ARG572GLN
calpain, large polypeptide L3/CAPN3	NM_000070	114240		ARG110TER
calpain, large polypeptide L3/CAPN3	NM_000070	114240		ARG769GLN
calpain, large polypeptide L3/CAPN3	NM_000070	114240		PRO319LEU
calpain, large polypeptide L3/CAPN3	NM_000070	114240		SER86PHE
Carnitine	X78706	600184	none found	
Acetyltransferase				
Carnitine	D87812	600528		ASP454GLY
Palmitoyltransferase I (muscle)				
Carnitine	U09648	600650	413 delAG	
Palmitoyltransferase II				
Carnitine	U09648	600650		ARG631CYS
Palmitoyltransferase II				
Carnitine	U09648	600650		E174K
Palmitoyltransferase II				
Carnitine	U09648	600650		F352C
Palmitoyltransferase II				
Carnitine	U09648	600650		M647V

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Carnitine Palmitoyltransferase II	U09648	600650	V368I
Carnitine Palmitoyltransferase II	U09648	600650	SER113LEU
Carnitine Palmitoyltransferase II	U09648	600650	R124Stop
Carnitine Palmitoyltransferase II	U09648	600650	ASP553ASN
Carnitine Palmitoyltransferase II	U09648	600650	PRO50HIS
Carnitine Palmitoyltransferase II	U09648	600650	GLU174LYS
Carnitine Palmitoyltransferase II	U09648	600650	PHE383TYR
Carnitine Palmitoyltransferase II	U09648	600650	F448L
Carnitine Palmitoyltransferase II	U09648	600650	G549D
Carnitine Palmitoyltransferase II	U09648	600650	ARG503CYS
Carnitine Palmitoyltransferase II	U09648	600650	TYR628SER
CCAAT/ENHANCER- BINDING PROTEIN, GAMMA; CEBPG		138972	none found
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	EX35, G-A
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	G-A, -9 EXON ALPHA DEL

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Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	3-BP DEL	PHE1388DEL
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	ACC-->ACT	Thr759Thr
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	BRANCH POINT, A-G, -20	
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	Exon 16 -3c-->t	
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	G-A, -1	splice change
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	G-A, -1 exon 5	
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509		ARG1353PRO
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509		ARG1421CYS
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509		ARG1494TRP
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509		R275Q
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509		V560M

for sulfonyleureas on pancreatic b cells	L78207	600509	F591L
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	G1382S
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	H125Q
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	N188S
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	R1215Q
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	R1394H
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	T1139M
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	S1370A
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	GLY716VAL
Cell surface receptor for sulfonyleureas on pancreatic b cells	L78207	600509	
cytochrome P450 aromatase (CYP19)	X13589	107910	(TTTA)n in intron 5

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cytochrome P450 aromatase (CYP19)	X13589	107910	1-BP DEL, 408C	frameshift
cytochrome P450 aromatase (CYP19)	X13589	107910	G-->A at Val80	silent
cytochrome P450 aromatase (CYP19)	X13589	107910	G-1094 -A	ARG365GLN
cytochrome P450 aromatase (CYP19)	X13589	107910	G-to-A	Val370-to-Met
cytochrome P450 aromatase (CYP19)	X13589	107910	GT to AT exon and intron 3	
cytochrome P450 aromatase (CYP19)	X13589	107910	splice donor (GT>GC) of intron 6	29 extra amino acids ARG435CYS
cytochrome P450 aromatase (CYP19)	X13589	107910		CYS437TYR
cytochrome P450 aromatase (CYP19)	X13589	107910		Arg264cys
cytochrome P450 aromatase (CYP19)	X13589	107910		ARG375CYS
Cytochrome P450 reductase	S90469	124015	none found	
Cytochrome P450, subfamily IIB (phenobarbital- inducible), polypeptide 6	M29874	None	none found	
Cytochrome P450, subfamily XIA (cholesterol side chain cleavage)	M14565	118485	5' UTR pentanucleotide repeat	

Cytochrome P450, subfamily XVII (steroid 17-alpha-hydroxylase), adrenal hyperplasia	M14564	202110	1-BP DEL	frameshift
Cytochrome P450, subfamily XVII (steroid 17-alpha-hydroxylase), adrenal hyperplasia	M14564	202110	1-bp C del codon 131	
Cytochrome P450, subfamily XVII (steroid 17-alpha-hydroxylase), adrenal hyperplasia	M14564	202110	1-BP DEL	frameshift
Cytochrome P450, subfamily XVII (steroid 17-alpha-hydroxylase), adrenal hyperplasia	M14564	202110	4-BP DUP, EX8	
Cytochrome P450, subfamily XVII (steroid 17-alpha-hydroxylase), adrenal hyperplasia	M14564	202110	469-BP INS	
Cytochrome P450, subfamily XVII (steroid 17-alpha-hydroxylase), adrenal hyperplasia	M14564	202110	518-BP DEL	
Cytochrome P450, subfamily XVII (steroid 17-alpha-hydroxylase), adrenal hyperplasia	M14564	202110	7-BP DUP, EX2	

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subfamily XVII (steroid 17-alpha- hydroxylase), adrenal hyperplasia	M14564	202110	IVS2, G-T, +5	
Cytochrome P450, subfamily XVII (steroid 17-alpha- hydroxylase), adrenal hyperplasia	M14564	202110	IVS7+5G to A	
Cytochrome P450, subfamily XVII (steroid 17-alpha- hydroxylase), adrenal hyperplasia	M14564	202110	T-->C promoter	
Cytochrome P450, subfamily XVII (steroid 17-alpha- hydroxylase), adrenal hyperplasia	M14564	202110		ARG347HIS
Cytochrome P450, subfamily XVII (steroid 17-alpha- hydroxylase), adrenal hyperplasia	M14564	202110		
Cytochrome P450, subfamily XVII (steroid 17-alpha- hydroxylase), adrenal hyperplasia	M14564	202110		ARG358GLN
Cytochrome P450, subfamily XVII (steroid 17-alpha- hydroxylase), adrenal hyperplasia	M14564	202110		TRP17TER

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(steroid 17-alpha-hydroxylase), adrenal hyperplasia	M14564	202110	PHE417CYS
Cytochrome P450, subfamily XVII (steroid 17-alpha-hydroxylase), adrenal hyperplasia	M14564	202110	PHE53/54 DEL
Cytochrome P450, subfamily XVII (steroid 17-alpha-hydroxylase), adrenal hyperplasia	M14564	202110	ARG239TER
Cytochrome P450, subfamily XVII (steroid 17-alpha-hydroxylase), adrenal hyperplasia	M14564	202110	PRO342THR
Cytochrome P450, subfamily XVII (steroid 17-alpha-hydroxylase), adrenal hyperplasia	M14564	202110	SER106PRO
Cytochrome P450, subfamily XVII (steroid 17-alpha-hydroxylase), adrenal hyperplasia	M14564	202110	PHE53DEL

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hydroxylase), adrenal hyperplasia	M14564	202110	his373leu
Cytochrome P450, subfamily XVII (steroid 17-alpha- hydroxylase), adrenal hyperplasia	M14564	202110	Arg496Cys
Cytochrome P450, subfamily XVII (steroid 17-alpha- hydroxylase), adrenal hyperplasia	M14564	202110	Gln461Stop
Cytochrome P450, subfamily XVII (steroid 17-alpha- hydroxylase), adrenal hyperplasia	M14564	202110	ARG96TRP
DOLICHOL- PHOSPHATE MANNOSYLTRANSF ERASE 1	603503	none found	
DOLICHYL- PHOSPHATE MANNOSYLTRANSF ERASE 2 REGULATORY	603564	none found	

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SUBUNIT				
Endothelin Receptor Type A	D90348	131243	none found	
Endothelin Receptor Type B	L06623	131244	1-BP INS, 878T	
Endothelin Receptor Type B	L06623	131244		TRP275TER
Endothelin Receptor Type B	L06623	131244		ALA183GLY
Endothelin Receptor Type B	L06623	131244		TRP276CYS
Endothelin Receptor Type B	L06623	131244		SER305ASN
Endothelin Receptor Type B	L06623	131244		GLY57SER
estrogen receptor 1 (ESR1)	X03635	133430	RFLP (PssI enzyme)	
estrogen receptor 1 (ESR1)	X03635	133430	RFLP (PvuII enzyme)	
Estrogen-preferring sulfotransferase/STE	NM_005420	600043	none found	
FATTY ACID COENZYME A LIGASE, LONG-CHAIN 2		152426	none found	
Folic Acid (Folate Receptor)	M28099	136430	none found	
follicle stimulating hormone-beta (FSH)	M16646	136530		CYS51GLY
follicle stimulating hormone-beta (FSH)	M16646	136530		FS87TER

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FSH receptor	M65085	136435	566C-->T	ARG573CYS
FSH receptor	M65085	136435	BsmI	ILE160THR
FSH receptor	M65085	136435	HindIII	PHE591SER
FSH receptor	M65085	136435	PstI	Thr307Ala
FSH receptor	M65085	136435		Asp567Gly
FSH receptor	M65085	136435		Ser680Asn
FSH receptor	M65085	136435		Asp334Gly
FSH receptor	M65085	136435		ALA189VAL
G PROTEIN- COUPLED RECEPTOR 24; GPR24		601751	none found	
glucagon receptor/GCGR	J04040 NM_000160	138030 138033	Dinucleotide repeat Alu-repeat	
glucagon receptor/GCGR	NM_000160	138033		GLY40SER
glucagon-like peptide 1 receptor/GLP1R	U01156	138032	silent substitution in exon 6	
glucagon-like peptide 1 receptor/GLP1R	U01156	138032	simple tandem repeat DNA polymorphism none found	
glucagon-like peptide 2 receptor/GLP2R	*****	603659		
glucocorticoid receptor	M11050	138040	4-BP DEL	2 bases of the exon and the first 2

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glucocorticoid receptor	M11050	138040	A to G 3'-splice junction of intron G	nucleotides of intron 6 frameshift
glucocorticoid receptor	M11050	138040	Base-pair deletion in exon 9	32 amino acid deletion
glucocorticoid receptor	M11050	138040	BcII	
glucocorticoid receptor	M11050	138040	T insertion 1188 and 1189	frameshift
glucocorticoid receptor	M11050	138040	trinucleotide insertion	Arg453
glucocorticoid receptor	M11050	138040	TthIII	
glucocorticoid receptor	M11050	138040		LEU753PHE
glucocorticoid receptor	M11050	138040		CYS736SER
glucocorticoid receptor	M11050	138040		CYS736THR
glucocorticoid receptor	M11050	138040		ILE747THR
glucocorticoid receptor	M11050	138040		ASP641VAL
glucocorticoid receptor	M11050	138040		L753F
glucocorticoid receptor	M11050	138040		Q710X
glucocorticoid receptor	M11050	138040		ASN363SER
glucocorticoid receptor alpha	U25029	138040	none found	
glucocorticoid receptor beta	X03348	138040	none found	
GLUCOCORTICOID RECEPTOR- INTERACTING PROTEIN 1	601993	601993	none found	
glycogen synthase [human, liver, mRNA, 2912 nt]	S70004	138571	IVS6, G-C, +1	

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glycogen synthase [human, liver, mRNA, 2912 nt]	S70004	138571	ALA339PRO
glycogen synthase [human, liver, mRNA, 2912 nt]	S70004	138571	ARG246TER
glycogen synthase [human, liver, mRNA, 2912 nt]	S70004	138571	ASN39SER
glycogen synthase [human, liver, mRNA, 2912 nt]	S70004	138571	HIS446ASP
glycogen synthase [human, liver, mRNA, 2912 nt]	S70004	138571	MET491ARG
glycogen synthase [human, liver, mRNA, 2912 nt]	S70004	138571	SER483PRO
glycogen synthase [human, liver, mRNA, 2912 nt]	S70004	138571	PRO479GLN
gonadotropin releasing hormone receptor/G protein- coupled/LHRHR/GNR HR	NM_0004 06	138850	ARG262GLN
gonadotropin releasing hormone receptor/G protein- coupled/LHRHR/GNR HR	NM_0004 06	138850	GLN106ARG

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gonadotropin releasing hormone receptor/G protein-coupled/LHRHR/GNR HR	NM_0004_06	138850	TYR284CYS
gonadotropin releasing hormone receptor/G protein-coupled/LHRHR/GNR HR	NM_0004_06	138850	Mae III
Gonadotropin-releasing hormone (leutinizing-releasing hormone)	M12578	152760	none found
GROWTH FACTOR RECEPTOR-BOUND PROTEIN 2; GRB2		108355	none found
Growth hormone 1	V00519	139250	G-T, +1 intron 4
Growth hormone 1	V00519	139250	1-BP DEL, 371C
Growth hormone 1	V00519	139250	18-BP DEL, +28-45 intron 3
Growth hormone 1	V00519	139250	FSI32TER
Growth hormone 1	V00519	139250	2-BP DEL
Growth hormone 1	V00519	139250	6.7-KB DEL
Growth hormone 1	V00519	139250	BglII
Growth hormone 1	V00519	139250	G-A, +1 intron 3
Growth hormone 1	V00519	139250	G-A, +28
Growth hormone 1	V00519	139250	G-C, +1 intron 3
Growth hormone 1	V00519	139250	G-C, +1 intron 4
Growth hormone 1	V00519	139250	HincII
Growth hormone 1	V00519	139250	MspI
Growth hormone 1	V00519	139250	T-C, +6 intron 3
Growth hormone 1	V00519	139250	ARG77CYS

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Growth hormone 1	V00519	139250	ASP112GLY
Growth hormone 1	V00519	139250	TRP20TER
Growth hormone receptor	X06562	600946	none found
growth hormone releasing hormone receptor/G protein-coupled/GHRHR	U34195	139191	IVS8DS, G-C, -1 alternative splice
growth hormone releasing hormone receptor/G protein-coupled/GHRHR	U34195	139191	1-BP DEL frameshift
growth hormone releasing hormone receptor/G protein-coupled/GHRHR	U34195	139191	2-BP DEL frameshift
growth hormone releasing hormone receptor/G protein-coupled/GHRHR	U34195	139191	C to T codon 236. silent
growth hormone releasing hormone receptor/G protein-coupled/GHRHR	U34195	139191	EX4,6DEL
growth hormone releasing hormone receptor/G protein-coupled/GHRHR	U34195	139191	GAA180GAG silent
growth hormone releasing hormone receptor/G protein-coupled/GHRHR	U34195	139191	IVS4DS, G-A, +1 alternative splice

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coupled/GHRHR growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	IVS6AS, G-T, -1
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	IVS8AS, G-C, -1
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	IVS9DS, G-A, +1 frameshift
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	ARG161CYS
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	GLU224ASP
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	GLU44LYS
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	PHE96SER
growth hormone releasing hormone	U34195	139191	ASP152HIS

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receptor/G protein- coupled/GHRHR growth hormone releasing hormone	U34195	139191	GLN154PRO
receptor/G protein- coupled/GHRHR growth hormone releasing hormone	U34195	139191	ILE153THR
receptor/G protein- coupled/GHRHR growth hormone releasing hormone	U34195	139191	VAL155GLY
receptor/G protein- coupled/GHRHR growth hormone releasing hormone	U34195	139191	VAL144ILE
receptor/G protein- coupled/GHRHR growth hormone releasing hormone	U34195	139191	PRO131GLN
receptor/G protein- coupled/GHRHR growth hormone releasing hormone	U34195	139191	GLU224TER
receptor/G protein- coupled/GHRHR growth hormone releasing hormone	U34195	139191	P561T
receptor/G protein- coupled/GHRHR growth hormone	U34195	139191	ARG217TER

releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	ARG43TER
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	U34195	139191	CYS38TER
growth hormone releasing hormone receptor/G protein- coupled/GHRHR	L29177		none found
growth hormone- releasing factor (GRF)	X63282	601244	none found
Guanylate cyclase 1, soluble, alpha 2	X66534	139396	none found
Guanylate cyclase soluble, alpha-3 chain	X66533	139397	none found
Guanylate cyclase soluble, beta-1 chain	X65633	202200	C818A
H.sapiens ACTH-R gene for adrenocorticotrophic hormone receptor	X65633	202200	Ser74Ile
H.sapiens ACTH-R gene for adrenocorticotrophic hormone receptor	Z22535	601299	none found
H.sapiens ALK-3 mRNA	X64810	162150	IVS5DS, A-C, +4
H.sapiens encoding PC1/PC3			

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H.sapiens encoding PC1/PC3	X64810	162150		GLY483ARG
H.sapiens HNF4 mRNA for hepatocyte nuclear factor 4	X76930	600281	1-BP DEL	PHE75T
H.sapiens HNF4 mRNA for hepatocyte nuclear factor 4	X76930	600281		GLN268TER
H.sapiens HNF4 mRNA for hepatocyte nuclear factor 4	X76930	600281		ARG154TER
H.sapiens HNF4 mRNA for hepatocyte nuclear factor 4	X76930	600281		ARG127TRP
H.sapiens HNF4 mRNA for hepatocyte nuclear factor 4	X76930	600281		VAL393ILE
H.sapiens HNF4 mRNA for hepatocyte nuclear factor 4	X76930	600281		Val/Met255
H.sapiens IL-1R2 mRNA for type II interleukin-1 receptor, (cell line CB23)	X59770	147811	none found	
H.sapiens mRNA for beta subunit of epithelial amiloride- sensitive sodium channel	X87159	600760	1-BP INS, 592C	
H.sapiens mRNA for beta subunit of	X87159	600760	32-BP DEL	

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